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ALASKA MEDICINE

Volume 22, Number 1 January/February 1980

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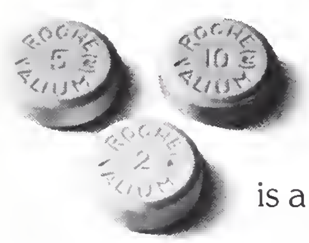
A character all its own.



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ALASKA MEDICINE

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ORIGINAL ARTICLES

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About the Cover: *Winter in Western Samoa* by John J. Kottra, M.D.

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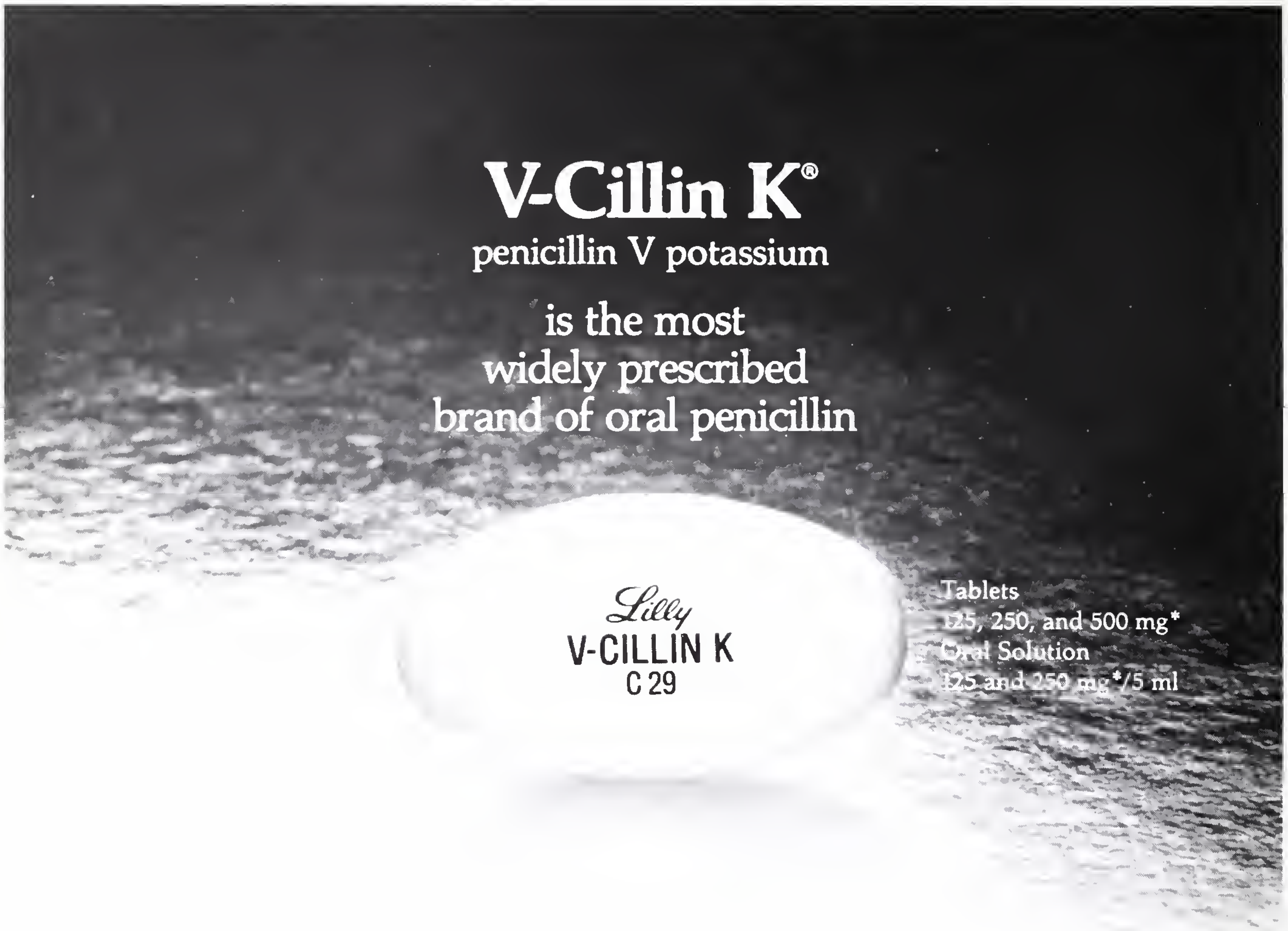

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PERINATAL CARE IN BETHEL, ALASKA

George Brenneman, M.D.

J. Kenneth Fleshman, M.D.

Jacqueline A. Greenman, RN, MPH

Setting

The Alaska Native Health Service Hospital in Bethel is one of the most demanding "Bush" hospitals in the Alaska Native Health Service. About 300 obstetrical deliveries are experienced every year. Bethel, being no different than other remote and rapidly changing transcultural areas, depends on well qualified but transient medical care professionals. The challenge, therefore, is to develop consistent and continuous high quality perinatal care in a setting where the number of deliveries are comparatively low and and where the staff is frequently changing.

Goals

Under the leadership of the Alaska Native Medical Center Pediatric and Obstetric Departments, the Alaska Native Health Service has set up five goals in perinatal health care.

* All pregnancies are to be identified as early as possible (at least by the first trimester) and brought into the health system for prenatal care.
* All pregnancies are to be received by an appropriate professional with reference to past and present medical and obstetrical histories, and potential rish factors to the mother and infant established.
* Care of all high risk pregnancies is to be pre-arranged at an appropriate higher level health care facility.
* All pregnancies that present with unexpected problems or complications are to receive prompt consultation and transfer if appropriate.
* At least 95% of all pregnancies from each Service Unit are to be delivered in a hospital.

The Bethel hospital and the Yukon-Kuskokwim Health Corporation staff have taken seriously these goals in providing perinatal health care to the inhabitants of the city of Bethel and of the 57 villages in the Yukon-Kuskokwim Delta region surrounding Bethel.

It is of value to examine the outcome of this care by reviewing all calendar year 1978 deliveries of women from the Bethel region.

Organization

Health care through the Alaska Native Health Service is organized on a regional basis. A village health clinic, staffed by one or more Community Health Aides is the first level of care. The Community Health Aide is a local resident who provides the bulk of the primary care in the village and who depends on tenuous communication linkages by radio or phone with a hospital. Pivotal in the regionalized system is the Service Unit Hospital, staffed and organized to provide basic medical, surgical, pediatric and obstetrical services to outpatients and inpatients who are residents of the region. Most Service Unit hospital patients have been evaluated first by the Community Health Aide. The final level of care in the system is at the Alaska Native Medical Center in Anchorage, where specialty services are available for re-

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ferrals from the Service Unit Hospital.

Good perinatal care depends on the effectiveness of this system. In practice, early pregnancies are identified and assessed by the Community Health Aide in the village. From this initial information, medically supervised Female Health Nurse Practitioners (RN's) who are located in Bethel, assign risk factors to and outline a management plan for each pregnancy. Monthly data from the Community Health Aide is then used to monitor each pregnancy.

Evidence of any problem or complication is indication to bring the pregnant woman to the hospital for a more detailed evaluation by a physician. Uncomplicated pregnancies are transferred at an appropriate time from the village to the prematernal facility in Bethel to await a physician and/or midwife attended hospital delivery. Any pregnancy that is at risk of producing a premature or sick neonate or a maternal complication is referred to the Alaska Native Medical Center if the transfer is judged to be of no additional danger to the mother or fetus.

Deliveries

For calendar year 1978 there were 409 deliveries recorded of women who gave the Bethel region as their address. Table I shows how those deliveries were distributed according to place of delivery.

Table 1

Bethel Service Unit Women Deliveries - 1978

Place	Number	Percentage
Bethel	312	76.2
ANMC	72	17.7
Village	25	6.1
	409	100

The deliveries of Bethel women that took place at ANMC show that 48 were referrals from the Bethel medical staff. These referrals were made because of potential maternal and/or neonatal or fetal complications. The remaining 24 were "self-referrals" for a variety of reasons, including transportation convenience, relatives in Anchorage, previous medical care in Anchorage and personal preference.

Of the 25 village deliveries, 16 women apparently remained in the village by personal or family choice. Just what factors led to that choice are not completely known and need further study. The other nine deliveries were probably unavoidable because of premature labor, error in calculating dates and adverse weather. In light of the goal to have not more than 5% of deliveries take place outside the hospital, the 6.1% seems acceptable. With better understanding of the reasons women choose to remain in the village and an improved educational program regarding the safety of hospital delivery, this percentage can likely be reduced to the present Alaska statewide rate of 2.5%.

Both maternal and infant risks are related to age and parity of the mother at the time of delivery. These factors are shown in Tables II and III.

Table II

Maternal Age Of Women Delivering - 1978 Bethel Service Unit

Age	Number	Percentage
14 - 19	48	12
20 - 29	259	63
30 - 35	77	19
36+	25	6
Total	409	100

Table III

Maternal Parity At Time Of Delivery - 1978 Bethel Service Unit

Parity	Number	Percentage
0	129	32
1	78	19
2	66	16
3	43	10
4 or more	93	23
Total	409	100

In contrast to earlier information collected in the Bethel region, women now delivering are much younger. In 1960 to 1962, 50% of the births were to women who were 30 years or older. Currently, only 25% of the births were to women whose ages were 30 years or older. The present 12% teenage deliveries compares very favorably to national experience. In the earlier survey, cited above, the median parity was 4, a contrast to a parity of 2.1 in 1978. These changes may well indicate a significant change in population behavior and an increased utilization of more available family planning services.

If the Bethel program is functioning as described, noticeable differences in the maternal and neonatal complication rates between the Bethel hospital and The Alaska Native Medical Center should be evident. This would be true because existing and anticipated problems of perinatal management were referred to the Alaska Native Medical Center. In fact, this appears to be the case and is demonstrated in Table IV.

Table IV

Maternal Complications - Bethel Patients
1978

Place Of Delivery	Number	Percentage
Bethel	5/312	2%
ANMC	17/72	24%
Village	3/25	12%
Total	25/409	6%

Maternal complications included in these statistics were conditions leading to C-section, pre-eclampsia requiring monitoring and intensive medical management and medical conditions such as diabetes or hypertension. Hemorrhage was excluded since the records did not provide adequate information to quantify the extent of blood loss. The rather marked difference in the percentage of complications, comparing Bethel and ANMC, is striking and strongly suggests that a majority of the maternal problems were identified at Bethel and effectively transferred for special obstetrical management.

The overall Cesarean Section rate as indicated on Table V was low compared to national trends. Long term assessment of the infants is not possible at this time, but the conditions of the neonates at birth as represented by the one minute Apgar scores compares very favorably with statistics from large centers.[2,3]

Table V

Cesarean Section Rate - Bethel Patients
1978

Place Of Delivery	Number	Percentage
Bethel	5/312	2%
ANMC	5/72	7%
Total	10/409	2.5%

Table VI

Infant Outcome - Bethel Maternity Patients
1978

Place Of Delivery	2500 GM	APGAR 7	Stillborn
Bethel	11 (3%)	38 (12%)	3 (1%)
ANMC	8 (11%)	6 (8%)	1 (1%)
Village	2 (8%)	-	-
Total	21 (5.1%)	44 (11%)	4 (1%)

The number of complications of village deliveries is clearly high. Three women needed air evacuation to Bethel for extraction of retained placentas, and four of the neonates were premature by weight.

Prematurity

It is preferable to transfer a premature *in utero* to a specialized care center rather than have a premature infant requiring intensive care at a general care facility. However special equipment is available in Bethel to transport a premature infant when the need arises. Based on the data in Table VI it appears that many prematures are being transferred *in utero*. Only 3% of the deliveries in Bethel were premature by weight, in contrast to 11% of the deliveries of Bethel women who delivered at ANMC. Because only 48 of the 72 Bethel women who delivered at ANMC were physician referrals, the percentage of premature births to the referred women is probably nearer 17%.

Of the 11 prematures born in Bethel, 6 were satisfactorily given care in Bethel, 2 died (both weighed less then 900 grams) and 3 were transferred to Anchorage. Two of these infants eventually received care in the Special Care Nursery at Providence Hospital. One of the two died, and the other returned to ANMC for convalescent care. Of the 8 premature infants born at ANMC, 7 were cared for at ANMC and one was transferred to the Special Care Nursery at Providence Hospital. Overall, 3 of the 19 premature infants died.

Summary

The philosophy and setting of perinatal care as provided in a remote Alaskan community has been outlined. Statistics related to perinatal care were collected, examined and presented. The data point toward good quality perinatal care in spite of the remote location of services, less than readily accessible specialty services, personnel turnover and a relatively low patient load. It is doubtful that additional technology or specialty services will have a very significant impact on improving perinatal care. In all probability, additional improvements in that care will be experienced only when improved patient education can be delivered. This is a goal for the future.

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SUCCESSFULL APPROACHES TO REDUCING EAR DISEASE AMONG NATIVE ALASKAN CHILDREN

Petra A. Illig

It is a very exciting experience, for a student in epidemiology, to trace the process of the identification of a health problem in a population, the designing of a program of intervention and finally witnessing the desired improvement in that population's health. It is especially exciting for the beginning student, as medicine and health care seem to be on the same level as magic, and therefore out of human control. After my first year of medical school in the WAMI program in Fairbanks, I was still under the impression that medicine is so overwhelming, that we health care workers are only helpless bystanders and could never be active participants in guiding a population to better health. When I was given the opportunity to help assess the impact of the Alaskan Native Health Service's surgical program to improve hearing in a selected population, I discovered with great delight that, with careful management and planning, we can indeed have a great effect. While the workings of the human body still is, and will always be, a great mystery to me, I have gained confidence that health care is not magic. We can have an effect, we can intervene, we can improve the quality of health.

Several decades ago, the Public Health Service focused its attention on tuberculosis in the Alaskan native, effecting the decline in the incidence of this disease. Since then, attention has shifted to include the evaluation of ear disease and its chronic sequelae. In the late 1950's, reports indicated a high prevalence of acute atitis media and otorrhea among native children, with those under two years of age at highest risk. The McGrath Report is 1957 found a prevalence of otorrhea of 17% among children, which initiated further surveys in the following decade. In a study of Eskimo infants in western Alaska, 38% of children had otorrhea within their first year of life, with 31% of this group suffering unilateral or bilateral hearing losses.[1] Similar rates were found in a 10 year cohort study of Eskimo children begun in 1960, where 36% of children under one year had otorrhea, in addition to 62% being affected by age four.[2] At this point, acute otitis media (AOM) and chronic sequelae including hearing loss were reported to be the most frequent cause of morbidity in the Alaskan native.[3]

The increasing awareness of this problem lead to programs to educate parents as well as to improvements in the training of village health aides in the recognition and early treatment of AOM. In addition, several health aides were taught to treat chronic drainage by suction and cleansing. Attention was focused on prevention and treatment of children in the first year of life.

The major concern with ear disease in young children is the effect on subsequent language development. Intermittant hearing losses during early language acquisition years have shown to have detrimental effects on verbal abilities and communication skills in these children.[4] Follow-up in 1969-71 of the 10 year cohort reported a 9% prevalence of AOM, with 16% of

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Petra A. Illig, University of Washington, School of Medicine.

the children between 7-10 years suffering a hearing loss of at least 26dBs, often resulting in difficulties in school. Unilateral and transient hearing losses affected verbal skills, especially with a history of AOM before the age of 2.[2]

By 1968, it was found that at least 14% of children studied had suffered chronic ear disease accompanied with hearing loss, one quarter of whom had bilateral involvement.[5] Such reports lead to a massive surgical program, which resulted in 77% anatomic success and 60% audiological improvement of operated ears. Various problems of a logistic and social nature were encountered in this program. Due to the dispersment of native villages, post operative courses were difficult to evaluate. Patient transportation by airplane after surgery produced some problems in tympanic membrane graft success, as did patient and parental medical ignorance.

In 1977, a screening program of native school children and available adults was begun in order to evaluate present prevalence of ear diseases, as well as to provide surgical care to individuals found requiring such therapy. This paper describes that program, and the resulting follow-up evaluations of selected patients in their home villages.

Materials And Methods

During calendar years 1977-78, three otolaryngologists, Bruce Whipple, Richard Raugust and Ronald Tinsley from EENT Clinic of Fairbanks, with the aid of the state public health nurses and assistance of the Public Health Service, conducted ENT clinics in villages of the Tanana Service Unit in the Alaskan interior. These clinics included routine otologic histories and examinations by the participating physicians, as well as selected audiometry when indicated. All school children available during village visits were examined, in addition to as many of the adult population as could be seen during that time. Those who were found to have specific problems were either treated with available medications or referred for further medical or surgical care. Most therapy was provided in Fairbanks by the above mentioned physicians.

As a result of this screening program, 140 surgical procedures were performed between October 1977 and June 1978. Follow-up exams of 108 procedures, involving 48 patients, were done by the author during visits to eight villages during June and July 1978. Examinations consisted of post-operative history, otoscopic exam, audiometry and tympanometry for potential tympanic membrane perforations. These audiograms were compared with those made pre-operatively in the Fairbanks clinic.

Results

In the 16 villages visited by the physicians, 1,578 people were examined and 1620 diagnoses made. Native population statistics were available from Tanana Chiefs Conference, Inc., the area's Native Corporation, on 13 villages (Table I), comprising a total population of 2864, with 1199 individuals 18 years or younger and 1665 adults. Approximately 48.7% (1396 of 2864) of the total population of these 13 villages was seen, with 1433 diagnoses made. Of these diagnoses, 65.7% (942 of 1433) were of children under 18, while 34.4% (494 of 1433) were diagnoses of adults.

Table I

Population Statistics of Villages Screened
(Native Residents)

Village	Total Population	18 or Older	Adults
1 Anatuvek Pass	unknown	70	unknown
2 Cantwell	unknown	unknown	unknown
3 Minto	200	unknown	unknown
4 Allakaket/Alatna	172	63	109
5 Arctic Village*	132	53	79
6 Evansville/Bettles	35	20	15
7 Ft. Yukon*	557	223	334
8 Galena*	427	203	224
9 Hughes	109	28	81
10 Huslia*	200	70	130
11 Kaltag	210	106	104
12 Koyukuk	140	44	96
13 Nenana	257	110	147
14 Nulato	325	158	167
15 Ruby	140	54	86
16 Venetie*	160	57	103
Totals	2864	1199 (41.9%)	1665 (58.1%)
# Diagnoses made	1433	942 (65.7%)	494 (34.4%)

*Villages visited for follow-up by the author, in addition to Stephen's Village, Chalkyitsik and Tanana.

Considering all 16 villages visited by the physicians, the examinations show that 80.7% of children were diagnosed with normal ENT findings. Similarly for the adults, 66.9% were normal. There is little variation in the incidence or normal exams between younger age groups, as indicated in Table 2.

In individuals under 18, the prevalence of chronic ear disease was found to be quite low, less than 2%. These diseases include chronic otitis media with tympanic membrane perforation (COM with TMP),COM without TMP, sensorineural loss, conductive loss, mixed loss, and TMP without active underlying disease. Acute diseases were somewhat higher in this age group, resulting in rates of 6.3% for serous otitis media (SOM) and 2.0% for AOM.

In contrast, the adult population was found to have higher rates of chronic diseases, ranging

Table 2

Ear Disease Diagnoses According to Age*

Diagnosis	0-6 (321)	7-12 (340)	13-18 (389)	Total Children	Adults	Totals
Normal	72.6% (233)	8.4% (286)	84.3% (328)	80.7% (847)	66.9% (363)	76.2% (125)
Serous Otitis Media	14.0% (45)	5.9% (20)	0.3% (1)	6.3% (66)	0.7% (4)	4.3% (70)
Acute Otitis Media	5.6% (18)	0.6% (2)	0.3% (1)	2.0% (21)	0.7% (4)	1.5% (25)
Chronic Otitis with TMP	1.2% (4)	0.3% (1)	1.8% (7)	1.1% (12)	2.2% (12)	1.5% (24)
Chronic Otitis without TMP	0.3% (1)	0.3% (1)	2.6% (10)	1.1% (12)	2.0% (11)	1.4% (23)
Previous Ear Surgery	2.5% (8)	3.5% (12)	2.8% (11)	3.0% (31)	4.1% (22)	3.3% (53)
Sensori-neural Loss	0	0.3% (1)	1.8% (7)	0.8% (8)	9.6% (52)	3.8% (60)
Conductive Loss	0.3% (1)	1.5% (5)	1.3% (5)	1.0% (11)	3.5% (19)	1.9% (30)
Tympanic Membrane Perforation	0.9% (3)	0.3% (1)	1.0% (4)	0.8% (8)	2.4% (13)	1.3% (21)
Mixed Loss	0	0	0	0	0.3% (2)	0.3% (2)
Other	3.7% (12)	3.8% (13)	3.3% (13)	3.6% (36)	6.6% (36)	4.6% (74)

*N=1578, while the number of diagnoses made is 1620, a difference of 2.6%.

from 0.3% for mixed loss to 9.6% for sensorineural loss. Their prevalence of acute disease was low at 0.7%.

The types of surgical procedures which were followed up in the villages are tabulated in Table 3. Of greatest interest are tympanoplasties type I and II, and tympanomastoidectomies, totaling 33 operated ears. As 2 tympanoplasty patients were unavailable for examination during follow-up village visits, information is available for 27 rather than 29 of these patients, resulting in 29 tympanoplasties. Four patients had 4 tympahomastoidectomies performed. At the time of follow-up, 88% (29 of 33) of tympanic perforations were successfully closed, 7% (2 of 33) were perforated, one had a possible small perforation, and one had wax impaction.

Improvement in hearing in all ear surgeries where patients were available for follow-up was determined by comparing pre- and post-operative audiograms. In 28 patients with 37 surgical procedures, an average of 16.3dBs improvement was found, with a range of 0.0 to 40.0dBs. These patients included the 25 with tympanoplasties, the 4 with tympanomastoidectomies, 3 of 12 with myringotomy and tubes, and 1 of 6 with tympanotomy. Some patients had more than one type of procedure.

Discussion

For simplicity in tabulations, calculations

Table 3

Surgical Procedures Performed in Evaluated Villages

Operation	Galena	Huslia	Tanana	Ft. Yukon	Arctic Village	Stephen's Village	Venetie	Chalkyitsik	Total
Tympanoplasty		6	2	4	6	6	2	3	29
Myringotomy & Tubes	1	1	2	2		1	4	1	12
Maxillary Sinus Irrigation		1			3		11		15
Tympanotomy	1				2		3		6
Adenoidectomy		1	1	2	1		4	1	10
Myringotomy				4	4		2		10
Tympanoplasty II	1					1			2
Tympanomastoidectomy			1		1		2		4
Stapedectomy					1		1		2
Simple Mastoidectomy	1								1
Tonsils & Adenoids							3		3
Nasoseptoplasty					2	1	1		4
Nasal Antral Window						2			2
Partial Ethmoidectomy						2			2
Rhinoplasty					1				1
Open Reduction of Nasal Septum						1			1
Open Reduction of Maxillary Fracture						1			1
Closed Reduction of Nasal Bones						1			1
Parotidectomy						1			1
Revision of Cervical Scars							1		1

of rates of diseases are based on the number of diagnoses made, rather than on patients seen, since a number of individuals had evidence of more than one type of ear disease. The 1578 total patients examined revealed 1620 diagnoses, which results in a 2.6% difference. This difference does not significantly alter incidence calculations, due to the large number of indi-

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	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		$p<0.02$	$p<0.01$	$p<0.05$	$p<0.02$	$p<0.002$

*0 = No relief 1 = Partial relief 2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

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Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

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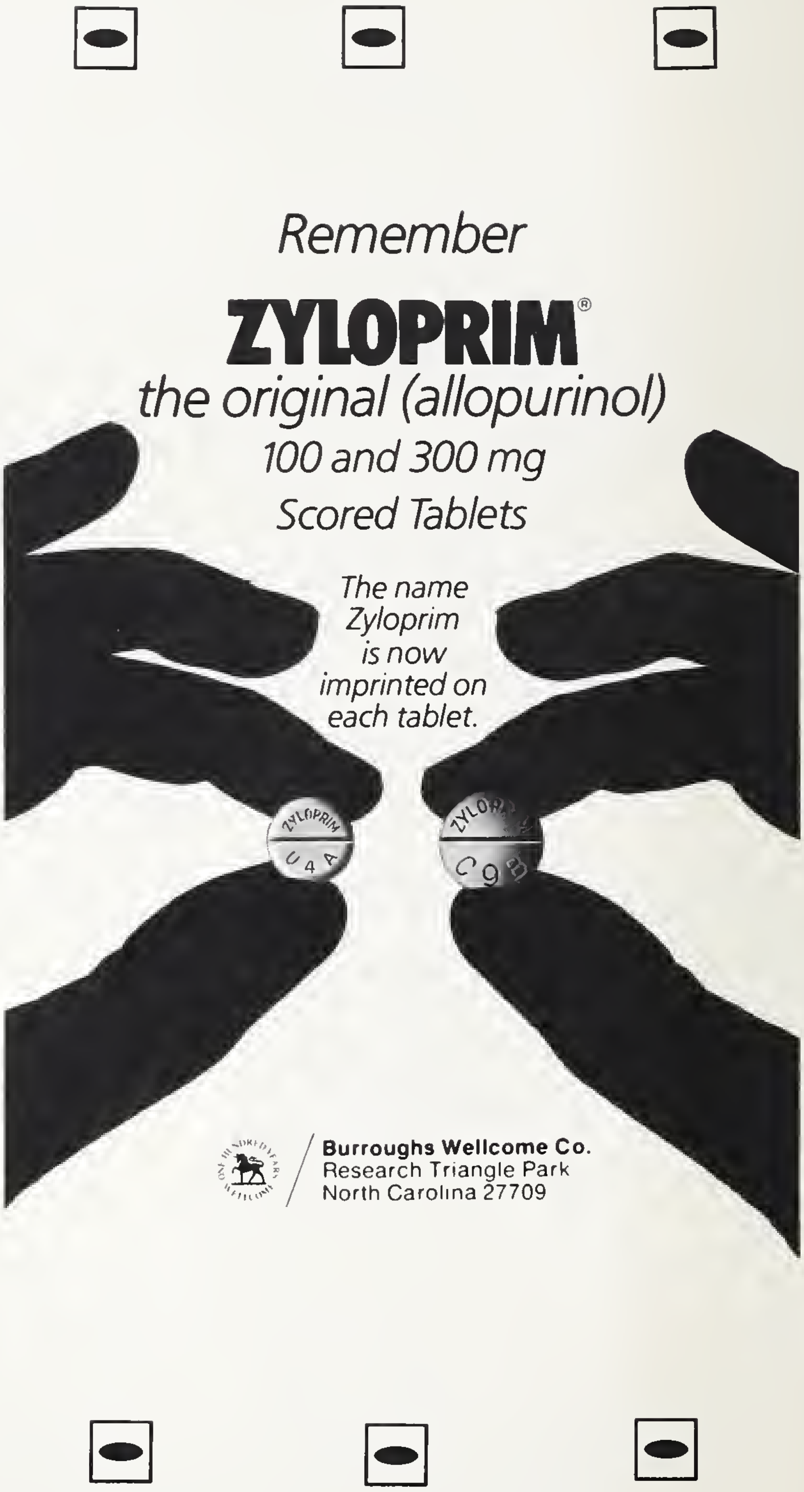
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viduals examined.

In contrast to screening programs of previous years, this one demonstrates a remarkably low prevalence of chronic ear disease of less than 2% among native children under 18 years of age. This figure corresponds well with the incidence of such problems in the general population, and reflects the benefits of medical care received at the village level in recent years, especially in the managements of upper respiratory infections and their sequelae. The increased awaremess among parents and village health aides has resulted in this dramatic change, and has therefore allowed the chronic ear diseases of adults to surface and become more evident. The most significant problem in this age group was found to be sensorineural hearing loss, with a rate of 9.6%. Conductive hearing loss was found in 3.5% of the adults as well. However, since this screening program was directed mainly toward school children, these are probably low values and reflect lower epidemiological reliability for adults with ear disease. With this in mind, it would be advisable to design educational programs directed toward adults and teenagers to prevent these problems.

The greatest problem among children was found to be acute in nature, as 2% were diagnosed as having AOM and 6.3% with SOM. This is not surprising, as they most often occurred in very young children under the age of 6, with improvement with age as expected.

The surgical procedures resulting from this screening program illustrate the great benefits of providing centralized, sophisticated medical care to the widely dispersed native population. Almost all patients with tympanoplasic procedures returned to their villages by airplane within 3-4 days of surgery, and this did not appear to adversely affect the results of their operations. In evaluating these results, it should be kept in mind that the follow-up period in all cases was less than one year. In addition to the extreme winters encountered in these villages, the frequently crowded living conditions of native families indicate the need to determine the long-term success of such surgeries.

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Health and Safety Tip
From the American Medical Association

535 North Dearborn Street/Chicago, Illinois 60610

Winter Brings Own Special Health Ills

Winter Health Ills

Winter presents some special hazards to health and physical comfort that aren't around the rest of the year.

First, there is the cold. Even in the Deep South there are some sharply cold winter days. And in the north there are many of them. The trick to surviving extreme cold is to be properly dressed. Layers of clothing are better than one very heavy garment. Proper socks and footwear are vital.

Frostbite is a constant threat for those who are outdoors very much in subfreezing cold. Frostbite creeps up on you before you know it. Ask a friend or relative to watch your cheeks and nose and ears for greyish, whitish spots. If one appears, get indoors fast. Don't rub the affected part. Let it thaw gradually. Ignore the old advice of rubbing it with snow. That only makes things worse, the American Medical Association points out.

There are more colds and more flu in the winter. Actually these are virus infections that do not depend on the weather. We sometimes get a cold in the summer, too. But there are a lot more in the winter.

A cold can't be cured once it starts. There are medicines that relieve the discomfort while the virus is running its course. Bed rest usually helps the sufferer to feel better. Just remember the guy who tells you he can cure your cold is talking through his hat.

If the sore throat, headache, fever and general discomfort that goes with colds or flu become unbearable, you may wish to see your doctor. He may prescribe additional medicines to alleviate the symptoms.

If the colds and flu persist, or recur frequently, there may be a basic health problem. Your doctor may order a full physical examination, complete with blood and urine laboratory tests, to try to get at the cause.

Cold air dries out when warmed to comfortable temperature. You may need to add to the indoor humidity in your home or office. If your skin becomes dry and itchy, use creams or lotions.

For most of us, there is no health hazard in keeping indoor temperature in the 60s, as urged by the government to conserve fuel. For some older persons, the 60s might be unhealthy. If you have doubts, ask your doctor.

January, 1980
Frank Chappell
Science News Editor
AMA

ACCIDENTAL HYPOTHERMIA: MANAGEMENT APPROACH

William J. Mills, Jr., M.D.

It is apparent that much controversy exists regarding the most effective and the least hazardous method of warming the victim of accidental hypothermia here in Alaska and elsewhere in this country.

This short review is aimed at an immediate review of the problem and an effort to demonstrate a basic fundamental methodology to handle rewarming.

The elements of controversy in warming methods include "peripheral" as compared to "core rewarming", the development of reported phenomenon of afterdrop and its significance, and the etiology of cardiac irregularities, attributed to certain warming methods.

Recently an evaluation has been made of over fifty Alaskan case histories. The temperature ranges, measured by both low reading and standard clinical thermometers, varied from 96° F. (36° C.) to 70° F. (23° C.). A large number of these patients had temperature recordings of 94° F. when they actually were in a much colder state, and brought forth again the fact that many Alaskan hospitals still apparently do not have available low reading core temperature thermometers. The age of the patients studied varied from 24 hours old to 90 years of age. These victims were warmed by six methods. These included:

1. Uncontrolled spontaneous warming K-Thermia pad, Warm Blankets, Dry Heat
2. Spontaneous Warming, Controlled
3. Rapid Re-warming, Warm Water Bath or Whirlpool, External Wet Heat, Uncontrolled
4. Rapid Re-warming, Warm Water Bath or Whirlpool, External Wet Heat, Controlled, 90° - 106° F. (32° - 42° C.)
5. Peritoneal Dialysis, Controlled
6. Gradual Warming with Warm Fluids, I.V., and the Use of Anesthetic Breathing Apparatus in Surgery.

Of all this group, there were four deaths. In two cases the warming method did not include full physical and chemical body monitoring or control, and treatment of the underlying abnormalities of the hypothermic state. These two were the first two patients treated in 1964 when interest in developing an adequate treatment method for hypothermia was begun by us. The other deaths are apparently the result of unresolved cardiac failure.

Most of the patients studied were dehydrated, demonstrated mild to severe acidosis and demonstrated evidence of hyperkalemia either after or during warming . The degree of awareness and consciousness was correlated with the level of hypothermia in both adults and children, and it became obvious that cerebration, response and even shivering ability was present at much lower levels than originally considered likely. Inherent was the danger that without a low reading rectal thermometer and with a moderately responsive patient, one might overlook a diagnosis of hypothermia. It was further noted that the optimum solution to the problem of hypothermia in the emergency area was dependent upon the time permitted to solve the complex metabolic and cardiac and chemical changes as they appeared. More time was obviously given the treating area to care for the patient by utilizing slower, spontaneous warming methods - (three to eight hours), and less was given when the rapid warming methods were utilized - (thirty minutes to one and one half to two hours). Under controlled warming, good result was demonstrated by all methods utilized. However, the patient with associated freezing injury appeared to obtain better extremity anatomical and functional result when the rapid warming and thawing methods were utilized.

It is helpful then in approaching the patient who presents suddenly in a very obvious state of hypothermia, to delineate the problem. The problem is:

1. Lowered core temperature
2. Decreasing function of metabolic system
3. Dehydration
4. Loss of caloric reserve
5. Enzyme system dysfunction
6. Hypoxia of tissues and transfer to anerobic metabolism
7. Metabolic acidosis
8. Renal dysfunction
9. Increasing loss of neuro-regulation
10. Fluid shifts and electrolyte imbalance
11. Metabolic ice box
12. In the field - death from total systems cessation or after rescue - life or death, depending on gradual, orderly controlled reorganization of organ systems.

If found alive by rescue personnel, the victim may be essentially in a "metabolic icebox", in a mid-lethal state, so that further exposure will result in death from vital organ cooling and warming may, if uncontrolled, result in death because of uncorrected acidosis, and the sudden effect of released metabolites or increased serum potassium levels resulting in cardiac excitation or hypovolemic shock.

It should be noted that the cold heart is in a fragile state and that it is possible that aggressive manipulation using C.P.R. (cardiopulmonary resuscitation) or efforts to cardiovert a heart not metabolically prepared to accept such stimulation, may result in irreversible cardiac failure.

Knowing the problem then, what are we attempting to do? The solution should include:

1. Safely, under control, rewarm the "cooled", "cooling" body, and elevate the core temperature
2. Obtain total physiological control of the patient by
    a. Adequate airway control
    b. Restoration of fluid electrolyte imbalance
    c. Correction of dehydration
    d. Correct the acidosis and alkylosis
    e. Restore renal function
    f. Develop adequate intravenous access (multiple), CVP Line
    g. Properly monitor the heart, vital signs, fluid intake and output
    h. Recognize and/or treat all of the conditions prohibiting immediate recovery

In order to do this, it is necessary that you have immediate control of the patient's rescue environment or warming environment and immediate organization of the rescue and treating personnel. Depending on the warming method, the patient may rapidly come to responsive state and therein lies his great danger. While in the field in his "metabolic ice box", the patient is for awhile a least, unless cooling continues, cold but often alive. His dangerous period and likelihood of metabolic and cardiopulmonary failure lies in warming area and in the hospital regions or rescue regions.

Therefore a planned approach to the problem is essential and it is important that physiological control be obtained as soon as possible. In this regard, the careful patient handling, the establishment of the airway, thorough evaluation of the patient and the early monitoring of temperature, electrocardiogram and urinary output is essential. The control, as noted above, includes initiation as soon as possible of the I.V. leads, blood gases and electrolytes, and repetitive monitoring of these values.

The correction of the hypovolemia, utilizing glucose and water solutions or physiological saline, once baseline blood gases and electrolytes are obtained, is demanded and then with those baseline studies, sodium bicarbonate may be given for correction of acidosis and Mannitol or Lasix to aid in development of renal perfusion. Fluids given should be warmed to physiological levels. Do not assume that the patient is in acidosis unless absolutely necessary, because acid-base values may indicate that for other disease or injury or loss of H^+ Ion, because of gastric suction the patient may occasionally be in a state of alkalosis.

Once the patient is under total system control, warming by the method best suited to the emergency area or hospital facility is utilized. These include:

1. Warm by your most familiar, effective method which may include:
    a. Spontaneous warming - controlled
    b. External rapid rewarming (90 - 106°) F.
    c. Peritoneal dialysis
    d. Question both b. and c. above
    e. Extra corporeal (heated circulation) blood, which includes:
        1. Cardio-Pulmonary Bypass
        2. Hemodialysis
        3. Other technology
    f. Anesthetic breathing apparatus sup-

port with total control
g. Warm inspired air with total control
h. Thoracotomy: Lavage: Controlled
i. However you wish: But have total control, and total familiarity with the method

Again, once the patient is under total system control, warming by your own familiar method or even spontaneous slow warming is utilized. Whatever the method, the purpose of the treatment begun is to:

1. Restore a normal blood volume and overcome dehydration
2. Restore the acid-base balance
3. Restore a proper electrolyte balance and avoid a post-warming hyperkalemic state resulting in cardiac excitation
4. Encourage a normal renal flow
5. Avoid serious cardiac arrhythmias and arrest of the heart, and in this regard it is recommended that consideration be given to the fact that the cold heart, at very low temperatures, is not responsive to defibrillation procedures and electroshock, and this heart in fact may not be in the true cardiac arrest state of the pattern familiar to us in a normothermic state, but may represent truly the very delayed metabolic response to severe cooling. It does not seem logical to markedly stimulate by closed chest massage or electrostimulation a heart that is unable to respond to that stimulation at the low temperatures.

With respiration controlled with an adequate airway, utilizing intubation when necessary, or utilizing warm inspired air, or the utilization of an adequate respirator with temperature and humidity control, further total control is completed.

At this stage, it would appear that the central large hospital areas, or outlying hospital facilities, need not be concerned that they have not available all of the multiple methods of warming patients recommended. It would appear that those patients who had spontaneous controlled warming of the hypothermic state, with or without rapid rewarming of the frozen extremities, with use of mechanical respirator, or anesthetic gas machine if necessary, may be utilizing the safest method of warming, particularly since it allows satisfactory time for continuous correction of any imbalance, as the patient approaches a normothermic state.

A recent meeting of the International Hypothermia Conference and Workshop was held at the University of Rhode Island, January 23, 1980. It was agreed that pending further laboratory investigation and further clinical data evaluation, CPR would be recommended only where the patient was totally unresposive, with no signs of life. De-fibrillation was not advised at temperatures below 85° F. Most Alaskan patients successfully resuscitated, alive, did not require either CPR or de-fibrillation.

That group also agreed that the use of warm moist inspired air was not in deep hypothermia, a form of primary rewarming, but instead had value in preventing further core temperature drop.

Again: Accidental Hypothermia

The Problem: A cold patient in a metabolic ice box: Alive?

The Purpose of Care: Bring patient to a physiological responsive state, under homeothermic control-living.

Consider: The higher the temperature of the warming methods, or thawing methods, the less time you have to direct, control, obtain and maintain the normal physiological state.

The Method: Rewarm only under total patient control.

It has been noted that of all the cases studied, 14 or 27.5% of the group were warmed spontaneously; using K-pads, warm blankets, heated inspired moist air and total system control and all survived. 17 patients or 33.3% were warmed by rapid rewarming in a tub at 100° - 106° F. including 10 patients with associated severe frostbite of the extremities, that were simultaneously thawed, and all survived. Both these methods are available in even the smallest of our outlying hospitals.

Bibliography upon request.

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PRESIDENT'S PAGE

MEMBERSHIP AND "POLITICAL ACTIVITY"

In the course of our annual billing for dues, I was made aware of yet another reason for non-participation in organized medicine. "The Medical Association (Society) is only for those interested in being politically active!"

Political activity is only one of the many facets of local, state and national association concerns. It does, however, consume a greater and greater share of our time, energy and money as more governmental organizations attempt to control all aspects of medical care.

You are forced to support these various government agencies such as HEW, FTC, the current Administration and others by paying taxes. At times it seems that the funds available to put pressure on medicine are unlimited.

Your only voice to maintain a proper perspective in these matters and fight when necessary is organized medicine. Those of us who happen to be in official positions, for whatever reason, are powerless to act effectively without your support. Whatever and whenever available, we need your intellect, time and energy. For those physicians not inclined to be "politically active" we continue to need your membership and financial support as a voluntary contribution to offset everyone's much larger mandatory contributions to the governments.

FINANCIAL CONCERNS

Careful consideration will have to be given to our financial position in the next several months. Dues were raised $50 in 1978. Prior to that date, dues had not been raised since 1974. Inflation and expansion of our activities continue to make expenses of the Association higher each year. Barring some unusual expansion of membership, a dues increase next year will probably be necessary.

In light of the above information, I continue to encourage you to acquaint you non-member colleagues, and particularly new doctors in the State, with the importance of participation in and support of, organized medical activities.

AD HOC MEDICAL BOARD COMMITTEE

As mentioned on a previous President's Page, the Alaska State Medical Board could potentially expire under Sunset legislation this summer. To address this problem an ad hoc committee has been set up under the chairmanship of your President-Elect, David Johnson. By the time of publication of this issue, the final report will have been presented to the Council at its January meeting. The Committee has developed a constructive outline for a more effectively functioning Board to help to insure the continuance of quality medical care for Alaskans. Your help may be requested to help inform the Alaska Legislature of the benefits of such a program.

Douglas G. Smith, M.D.

CONTINUING EDUCATION

The Association will continue its committment to sponsor and disseminate information about worthwhile educational activities within the State. Those of you who are involved with educational activities may wish to contact the Association office to have your programs included in the Newsletter. Our Annual Meeting at Mt. McKinley in June will also have a worthwhile scientific program and I hope you are planning to attend.

MEDICINE UNDER ATTACK

Peter E. Cannava, M.D.

Medicine and all of its branches are under attack, not only from bureaucrats but also from para-medical and non-medical technicians who are trying to lower the standards of licensure so they may practice medicine even though they have not achieved the proper qualifications.

Ophthalmology, at present, seems to offer the most opportune target, but it will serve only as a precedent for the invasion of the practice of other branches of medicine by para-medical and non-medical groups.

The strategy by which non-medical groups hope to obtain medical status was clearly revealed when, in 1978, optometry launched a multi-million dollar nationwide advertising campaign. Those ads told an unsuspecting public that, "An examination by an optometrist is also a good place to begin guarding your family's total health care." They concluded this effort to bypass the general medical practitioner, the internist and the pediatrician as well as the ophthalmologist by proclaiming "Your Family Doctor of Optometry. The person to see. And keep seeing."

Optometrists hace succeeded in obtaining by legislative fiat the right to use so-called diagnostic drugs in 21 states and therapeutic as well as diagnostic drugs in two states. Recently legislation was proposed in Arizona which would have permitted these same untrained non-medical practitioners to perform surgery in the eye and its adnexa.

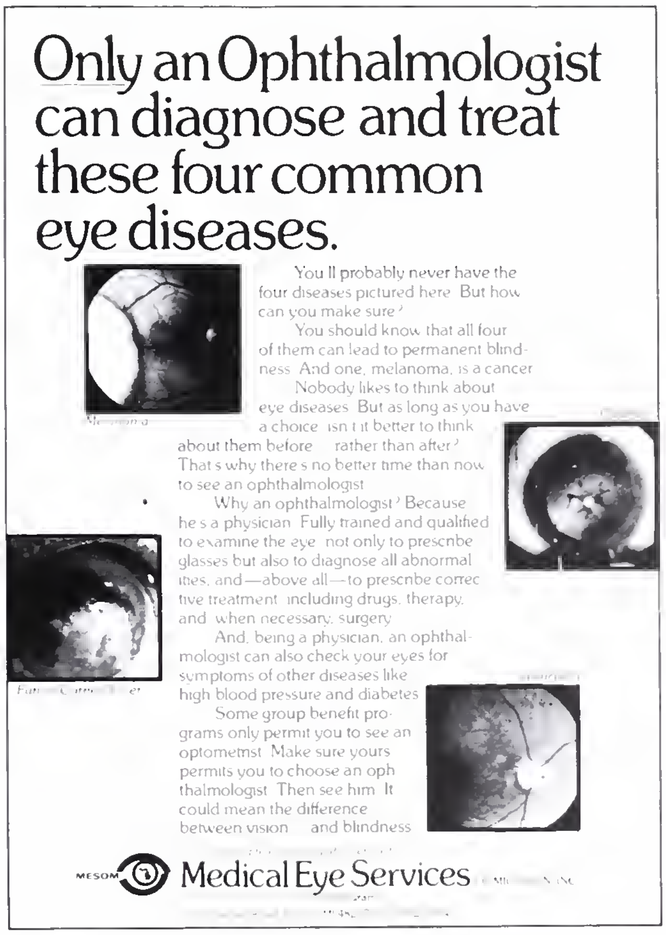
The decline of Ophthalmic standards and the demise of ophthalmology as a recognized medical specialty would establish a precedent fraught with grave danger for all of medicine. It would provide both the legal sanctification and popular momentum that has so long been awaited by audiologists, nurse practitioners, psychologists and a host of other allied practitioners, medical technicians who seek to obtain by decree what they have failed to obtain by degree. This is emphasized by Iowa chiropractors in their suit against the AMA as they charge that the AMA and the rest of organized medicine have excluded chiropractors and prevented them from practicing their trade freely by controlling public access to them and other emerging health care practitioners such as nurses, physical therapists and physician assistants.

Ophthalmology is taking its case to the people, in the interest of protecting the public health. The accompanying copy of an advertisement which appeared in several national magazines distributed throughout Michigan was sponsored by Michigan ophthalmologists. The ophthalmologists of this state are prepared to do as much and invite their professional colleagues to join them in a united effort to inform the public of these dangers to their health.

If you have any suggestions or wish to discuss this matter, the following physicians will welcome your call or letter:

Peter Cannava, M.D. (Soldotna) Phone 262-4462
Sam McConkey, M.D. (Fairbanks) Phone 456-7767

Peter E. Cannava, M.D., President, Alaska Association of Ophthalmologists, Box 1629, Soldotna, Alaska 99669.



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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

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lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

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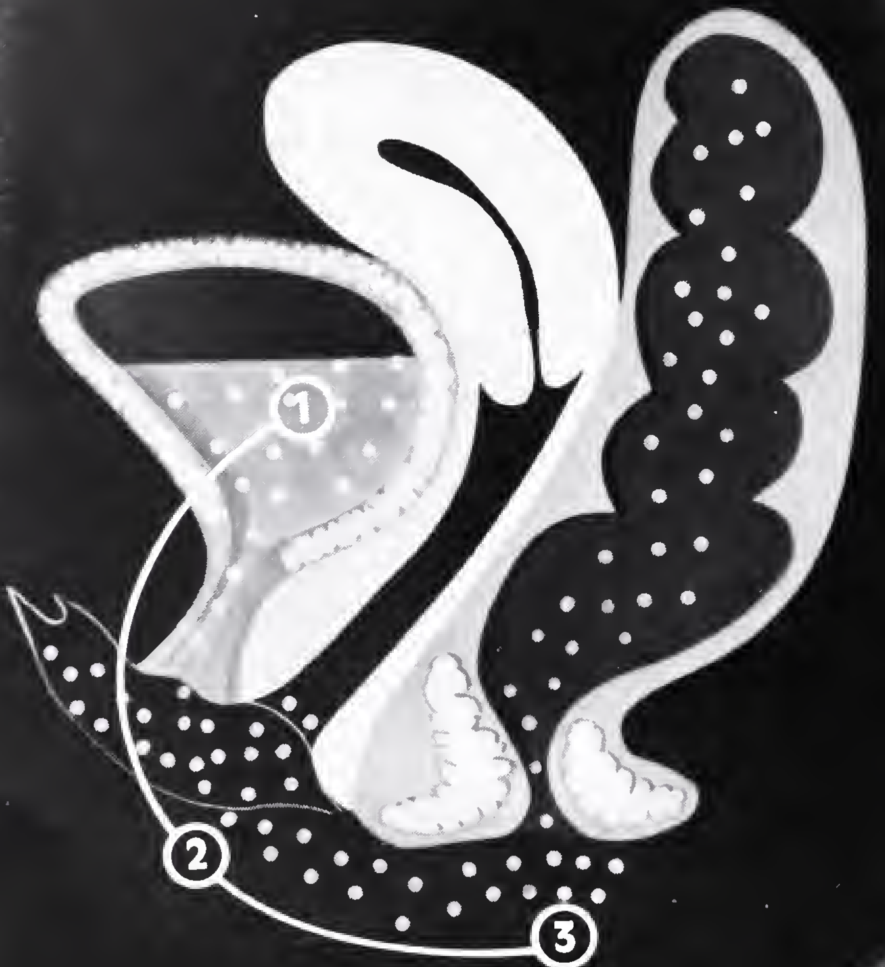

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ALASKA MEDICINE

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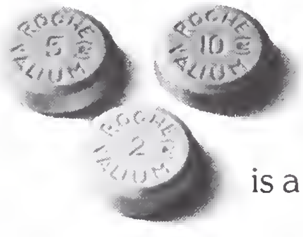

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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Volume 22 March/April 1980 Number 2

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About the Cover: *Mushing the Iditarod - 1979* by James Lanier, M.D. (Mushing Doctor).

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Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

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PHYSICAL ISOLATION FROM SPECIALTY CARE: A PROBLEM OF FAMILY PRACTICE IN BUSH ALASKA

Robert E. Drickey, M.D.

The physician practicing medicine in rural Alaska faces a special problem: the disparity between the way modern medicine should be practiced and the way it must be practiced in the unusual circumstances of the bush. The problem exists in medicine in general, as in the perennial town vs. gown controversy, but the disparity between the ideal and the real is especially striking in rural Alaska. This paper will explore some of the reasons why the problem exists, explore how the problem affects physicians and propose some partial solutions. A recognition of this problem and an exploration of possible solutions has important implications for physician recruitment and physician job satisfaction in isolated areas. Physicians who are considering employment in an isolated area, such as with the National Health Service Corps or the U.S. Public Health Service, should be aware of the possible psychological stress which may result from physical and medical isolation.

A review of the literature reveals many papers on the problems of rural vs. urban practice, how to attract physicians to rural practice, etc., but none of the papers reviewed addresses the problem of family practice in an area isolated from direct contact with other specialists.

A disparity between ideal medicine and real medicine is most strongly evident in emergency, life-threatening situations is which immediate and continuing critical care must take place. Critical care situations are relatively frequent in rural Alaska. Accidents are the third largest cause of morbidity in the Norton Sound region of Alaska. Trauma in rural areas of the U.S. in general has a higher fatality rate than in urban areas. Although 70 percent of the population of the U.S. lives in urban areas, up to 70 percent of trauma fatalities occur in rural areas.

Day-to-day, routine medical problems can be managed almost as comfortably in isolated areas as in less isolated locations by well-trained family practitioners. Actual physical consultation is possible in the non-emergency situation although it is expensive. If need be, the patient can fly to a large population center to consult with a sub-specialist. Also, itinerant specialty clinics can be scheduled in the bush areas. But in critical care, decisions must be made and continuing care must be rendered by the family physician without sub-specialty training and in many cases using inadequate equipment.

The basic cause of this problem confronting the family physician in rural Alaska is distance and isolation. A critically injured patient must first be transported from the site where the injury occurred, often in a village, to a larger population center such as Nome, Bethel or Kotzebue where physicians are located. These population centers in western Alaska are at

---

Robert E. Drickey, M.D., Robert Wood Johnson Faculty Development Fellowship Program, Department of Family Medicine, University of Washington. Dr. Drickey practiced for approximately 2 years in Nome.

AMA Rates High in New Gallup Poll

The American Medical Association—as an organization—has received high marks in two public opinion polls on the credibility of major social institutions. The AMA ranked higher than all other groups in two surveys of public confidence conducted by the Gallup Organization.

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CONTRAINDICATIONS: Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

PRECAUTIONS: Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication.
Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

ADVERSE REACTIONS: Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued

DOSAGE AND ADMINISTRATION:
1 tablet upon retiring When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U S Patent 2,985,558

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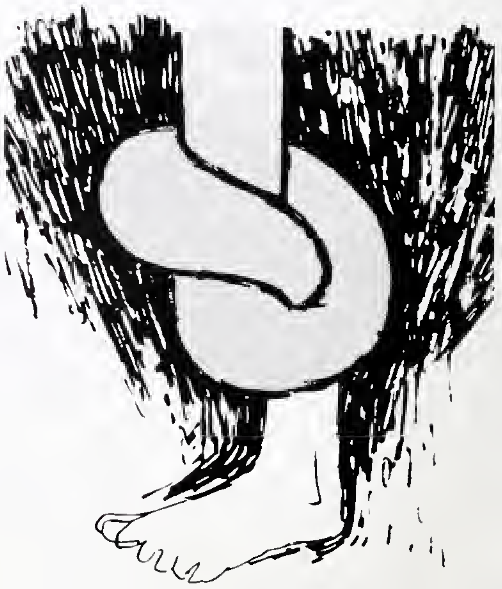

for Knotts in the night

Quinamm™

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

specific therapy for painful night leg cramps

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least three hours by air from Anchorage or Fairbanks when one includes start-up time for locating an airplane and transporting the patient to the plane. Many times, poor weather prohibits air travel in any case. Therefore, immediate expert surgical intervention is precluded unless there is a general surgeon in the rural area.

There is a paucity of specialists other than family practitioners in the rural areas of Alaska. A specialist needs a large population to provide adequate demand for his or her particular services. For example, only one person in a thousand may require the services of a neurosurgeon. The most basic specialist needed in the critical care situation is a general surgeon. The population base in any area of rural Alaska is too small to support a surgeon who is not willing to do general practice. Indeed, it is questionable whether there is enough surgery in those areas to maintain the necessary skill level of a surgeon even if he or she were willing to do general practice.

Another reason for the problem under discussion is the lack of sophisticated critical care equipment in rural areas. Critical care equipment is too expensive to be purchased and maintained in isolated areas. Skill in the use of such equipment can be maintained only by frequent use which may not be possible with the relatively low volume of critical care situations in the bush. Another need in critical care is for blood to be rapidly available. The maintenance of a blood bank is impossible in an isolated area with a small population. Blood must be typed, cross matched and drawn from donors at the time when it is needed, a process which takes at the very least one hour per unit.

The following is an example of a critical care situation in rural Alaska.

A 17-year-old Eskimo male residing in a village 140 miles from Nome attempted suicide by shooting himself in the abdomen with a .222 rifle. The health aide was called, the hospital in Nome was notified and a plane was dispatched to retrieve the youth. This whole process took three hours. Incidentally, the weather was marginal and the flight involved some rish for the pilot and the nurse who accompanied him.

On admission to the hospital in Nome at 3:00 a.m., the patient was found to have an entrance wound in the epigastrium, no exit wound, a distended abdomen with no bowel sounds, a right hemothorax and a surprisingly stable blood pressure of 100 over 60. The abdominal wound had tamponaded itself. A chest tube was placed to drain the hemothorax. Blood donors were called in and four units of blood, two of them type specific, were given, a process which took three hours. In the mean time, a Lear jet was dispatched from Anchorage to Nome, a process which took 2½ hours (one hour start-up time and 1½ hours of flight time). The the flight to Anchorage took two hours. There was a 30-minute ambulance ride to Alaska Native Medical Center. The evaluation by the surgeons took at least 30 minutes and finally surgery was begun at about 8:00 a.m. At surgery it was found that the patient's liver was essentially destroyed, and no surgical correction was possible. The youth died one day later.

The outcome in this case for purposes of this discussion is immaterial. The point is that the patient needed the care of a specialist other than a family practitioner about five hours before that was possible. The patient could have died at any time during that long process and the family physician caring for him would be left to ponder, "What if we had been closer to the medical center," "What if I were a general surgeon," or "What if I knew more."

The disparity between ideal medicine and real medicine creates dissonance within the family practitioner in the isolated situation. Webster's dictionary defines dissonance as "inconsistancy between one's actions and one's beliefs." The concerned physician in isolated rural medicine must decide how to live with the disparity between ideal and real medicine and the dissonance which is created by that disparity. The dissonance may cause the physician to be beset by doubts about his or her own abilities. The stress created by those doubts is a factor in the high rate of turnover of physicians employed in rural and isolated areas.

Most modern physicians have been trained within academic institutions where expectations are high. Rightly or wrongly, death is viewed as defeat. This makes it difficult to be philosophical about deaths which might have been prevented "if only we had been closer to the medical center" or "if only I had known more."

Another characteristic of the academic medical community which may carry over to the isolated physician in practice is a reticence to discuss with peers feelings about the death of one's own patient. Technical review of deaths may take place but may be of no help to the physician who is blaming himself or herself for the death of a patient who might have lived "if only we had been closer to the medical center."

One of the pressures which increases dissonance for the physician is the increasing medical expectation of the consumer public. Rural Alaska is part of the United States, and in the United States good quality medical care is regarded, correctly, as a right and a necessity. On the other hand, may times the consumer public does not realize that with the tremendous increase in medical knowledge and technology, it is virtually impossible for any physician to be the complete "jack-of-all-trades" generalist of years past. But the public expectation persists that the physician will be "just like old doc so-and-so who was here 15 years ago and could do everything."

Rural Alaska, as part of the United States, with rising medical expectations, will undoubtedly see an increase in medical malpractice suits. This is another factor which may increase the dissonance which the isolated M.D. might feel.

In discussing possible solutions to this problem, it is necessary to realize that the problem will never be completely resolved. The structure of the medical system now and in the forseeable future is not conductive to change of the type which would encourage other specialists besides family practitioners to practice in isolated area. The partial solutions to this probelm then must come from within the medical system as it now stands.

There must be increased support for the physician practicing in bush areas - support from within the local medical community and from the larger medical community.

In the local medical community, physicians working together must discuss and share ideas when caring for medically-difficult patients. With the heavy call schedule in the bush (every third night), the physician is reluctant to call in a colleague for consultation. But for the patient's welfare, such consultation must take place. But in addition to discussion of the technical aspects of patient care, there should be some discussion of the physician's feelings. That is, how secure or insecure does the physician feel in caring for a difficult case. In death and complication conferences, time should be devoted to the physician's feelings about the death. Is he or she feeling responsible or to blame? Admittedly this is difficult to do formally and often lack of time will be cited as a reason for not approaching these "soft" areas. But an attempt must be made.

One of the physicians in Nome has attempted to improve the surgical capability in the area by working with the surgeons at the Alaska Native Medical Center for two months, doing as many appendectomies and C-sections as possible during that time. Such additional training is valuable but the basic problem remains in that there will always be surgical cases beyond the capabilities of the family practitioner doing surgery. Indeed, there will always be cases beyond the capabilities of the general surgeon doing surgery. Again, to reiterate, even a surgeon needs a relatively high volume of surgery to maintain his or her skills in order to provide optimal care.

The larger medical community is able to offer increased support to the physician in the isolated situation by remembering the special circumstances of the bush when consulting by telephone.

Agencies such as the National Health Service Corps which employ physicians in isolated areas must recognize the problem which has been outlined here so that the physicians' "stress level" can be monitored and support offered. Support might include allowing the physician to leave the high stress practice for several months each year for vacation and/or further training.

A realistic appraisal of the practice conditions which have been described here should be made explicit to physicians who are considering work in an isolated area so that the physician might better understand his or her thoughts and feelings as they arise in the high stress situation.

The NHSC, through its scholarship programs, will soon be placing a large number of physicians in rural and isolated situations. It has been proposed that NHSC scholarship recipients be given special training during medical school to prepare them to serve in medically-underserved areas. Recognition of the problem discussed in this paper should guide planning for a portion of that special training.

Summary

Optimal care, as defined by standards in the United States, cannot be provided by the family practitioner in a physically isolated area because the family physician is not able to directly utilize resources provided by other specialists. Therefore, there is a disparity between ideal medicine and real medicine in these areas which may cause dissonance and self-doubt in the concerned family physician.

Agencies employing physicians in isolated areas and the physicians themselves must be aware of this phenomenon so that proper steps can be taken to prevent and ameliorate the sequelae of the stress engendered by the disparity between the real and the ideal.

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Intelligent Patient Gets Better Care

Patients Can Help

Being an intelligent patient may reduce your medical bills and help you obtain better health care.

Learning to work with your doctor is the beginning of the process, the American Medical Association points out.

First, choose a family physician. Make an appointment for an examination, so you can get to know him and he can get to know you. Then if you become ill or injured you will know whom to turn to.

There is a real advantage in going to the doctor's office, rather than attempting to get him to come to your home. It is to your advantage to be examined where all necessary equipment and allied health workers are present. It also saves money.

Before phoning for an emergency appointment, collect your thoughts and be prepared to list symptoms. If you brief the doctor properly, he may be able to give advice by phone. Or he may counsel you to come to his office. If there is a real emergency, he may suggest that you meet at the hospital.

Make the most of the medical time you are paying for in the doctor's office. Have in mind important facts about past illnesses, operations, and accidents. Have your questions ready, and do not apologize for asking. Full information about your health is important to your well being. You go to the doctor for two things: his opinion and his advice. Be sure you are well satisfied on both counts.

Don't hesitate to ask about fees. Your doctor would prefer that you open the subject, since you are aware of your own financial situation, and he is not.

No one would dream of buying a pair of new shoes and throwing one of them away. Yet, some people leave their doctor's office with a prescription and some advice and do nothing about either. You've paid for the advice. Follow it.

March, 1980
Frank Chappell
Science News Editor
AMA

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CANCER RADIATION THERAPY CAPABILITY IN ALASKA

Charles J. Sternhagen, M.D.

Peter A. Fleming, M.D.

The following article is the first of a planned column on cancer related topics to be included in each issue of Alaska Medicine.

The purpose is to keep Alaskan doctors up to date on new developments in cancer prevention, detection and treatment, as well as keeping well informed on the local facilities available for diagnosis and treatment. Succeeding issues will include articles on management of a wide range of cancer problems. Dr. Charles J. Sternhagen, Director of Radiation Oncology at Providence Hospital in Anchorage and his Associate, Dr. Peter A. Fleming, have been asked to clarify the availability of tumor radiotherapy in Alaska in our first column.

Richard Buchanan, M.D.

Virtually all forms of cancer diagnosis and treatment methods are currently available in Alaska, including essentially all forms of diagnostic imaging, laboratory methods, surgical procedures, chemotherapy and radiation oncology.

Both Fairbanks and Anchorage have certified specialists in medical oncology and other experienced physicians are capable of giving chemotherapy as well. It is rarely, if ever, necessary to refer patients outside for chemotherapy. In addition pediatricians are taking a dynamic role in the primary care of pediatric cancer patients which is the leading disease causing death in children.

The hospital laboratories are well equipped to diagnose all forms of cancer by clinical laboratory methods and special pathological determinations. In addition outside experts in respective fields of pathology are consulted on a regular basis for non-routine pathological specimens.

All diagnostic radiology imaging methods are currently available including new computerized scanning techniques for accurate diagnosis, staging and tumor localization.

Radiation Therapy at Providence Hospital, Anchorage

Radiation therapy in Alaska is available at Providence Hospital in Anchorage where about 400 cases per year are now being treated. Approximately 40% of the cases treated come from outside the Anchorage area.

Alaska has certified specialists in radiation oncology and well equipped facilities in a new 4,000 square foot department at Providence Hospital in Anchorage. The present equipment includes all forms of implant therapy such as 137-Cesium, 192-Iridium, 125-Iodine, as well as a 90-Strontium source for application therapy to the eye.

Other equipment in radiation oncology includes the TP-11 computerized treatment planner, the Therasim 750 Simulator and the Theratron 80 60 Cobalt Teletherapy machine.

The Therasim 750 is a simulator x-ray machine designed solely for radiation therapy. It produces high quality films and has fluoroscopic capability which can rapidly show the exact angles and field sizes which outline the sizes and shape of portals surrounding tumors. Tumor localization is performed with the assistance of computerized tomography using the body scanner. After tumor localization and simulation the patient's contour is matched with the simulated radiation portals and the CT Scan at the central axis of the beam. This information is then entered into the TP-11 computerized treatment planner which can call up a planning beam to be reviewed on the oscilloscope in a few seconds. The dosimetrist can create as many different computer plans as are desired and the best plan is chosen from several to optimize the patient's radiation therapy plan.

Immobilization techniques are used to reduplicate patient positions daily during therapy with the assistance of anterior and bilateral laser depths. Cerrobend alloy is used with styrofoam molds to manufacture individualized shields to spare normal structures and enhance the accuracy of therapy.

Linear Accelerator

Providence Hospital is currently applying for a certificate of need which will, if approved, enable the purchase of the most modern accelerator available and which will add 5 electron beams and 2 additional photon beams to the present capability. This accelerator will bring to Alaska the best available state-of-the-art equipment in radiation therapy.

The field of radiation oncology worldwide is experiencing a renaissance in implant therapy.

Implant therapy or interstitial brachytherapy or endocurietherapy are terms used to indicate radiotherapy by encapsulated radionuclides imbedded in tissues. Brachytherapy first arose in 1901, three years after the discovery of radium when Pierre Curie suggested that a small radium tube be inserted into a tumor. In the 1920's, Regaud, at the Radium Institute in Paris, developed universally accepted methods of treatment with radium needles of low intensity. Interstitial endocurietherapy was developed and popularized by Henschke in 1953 with the advent of radium substitutes (192-Iridium), afterloading of radioactive sources and computerized dosimetry.

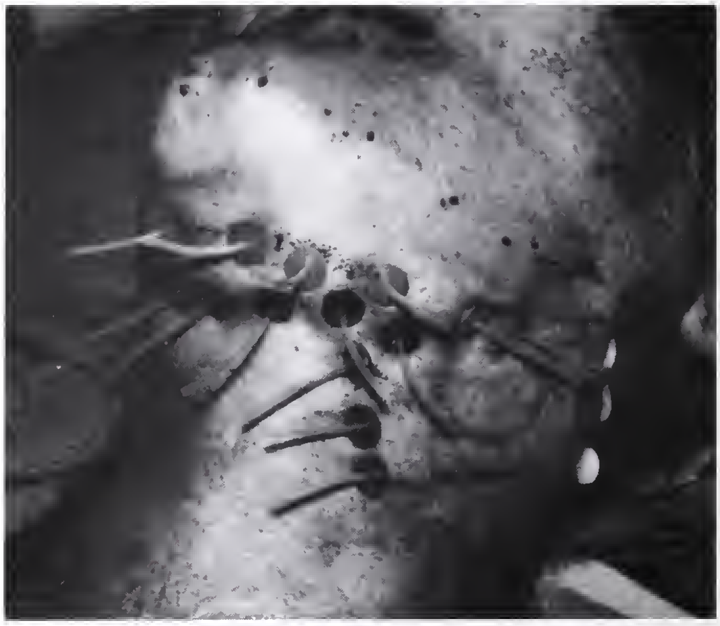
In general in 15 to 20% of all cases it is possible to use an implant with radiation material placed in the tumor volume. This is particularly applicable in the majority of tumors of the head and neck, breast, pancreas, uterus, prostate, rectum and anus, and other sites. There are also certain other specific types of less routine situations in which implant therapy can be used to enhance the therapeutic ration when used either alone or in combination with external beam therapy. These situations include certain locations and stages of tumor of the lung, nodes, subcutaneous masses, pelvis and other sites. Implants are also very useful in those instances where localized recurrent or persistent tumors require further therapy. Implants can bring high tumoricidal doses to the lesion safely while sparing those normal structures that would otherwise have to be traversed by using any other external beam except the pion beam.

Pion beams (negative pi mesons) are available as an experimental research treatment only at the Los Alamos Scientific Laboratories in Los Alamos, New Mexico and have not been tested for widespread general use. The neutron beam is undergoing testing also and probably has less hope of applicability than the pion beam to radiation oncology. Again the pion and neutron studies will take several more years to determine their efficacy in cancer treatment.

Housing

The problems of temporary housing for radiation therapy and chemotherapy patients during the course of treatment who live outside Anchorage are being addressed by the Providence Hospital, The American Cancer Society and other groups. Since the current demand for temporary housing facilities is increasing, planning is now underway to provide additional temporary housing space for ambulatory patients undergoing radiation therapy or chemotherapy who live outside Anchorage and do not require hospital or nursing home care.

In summary, the treatment of cancer in Alaska is currently on a par with many other centers in the ability to provide surgical cancer treatment, chemotherapy and radiation therapy - the latter because of the most advanced techniques in computerized treatment planning, tumor localization, treatment simulation, immobilization and the latest radiation implant services available.



This figure demonstrates two curative implants performed simultaneously: A. floor of mouth, B. node in left submandibular region. Both implants were made using temporary afterloading 192 Ir interstitial implant technique at Providence Hospital, Anchorage, Alaska.

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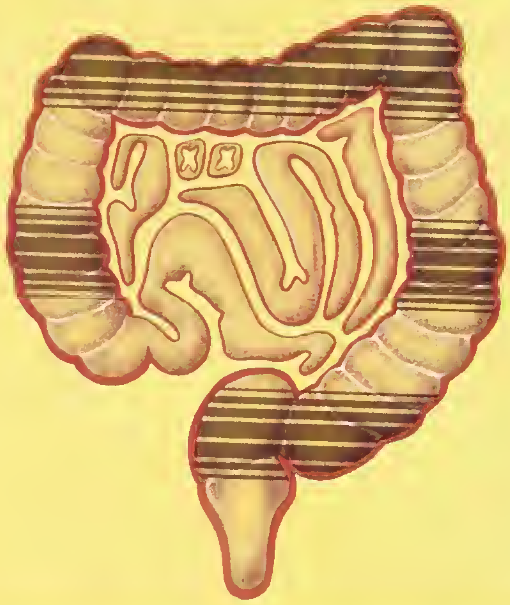

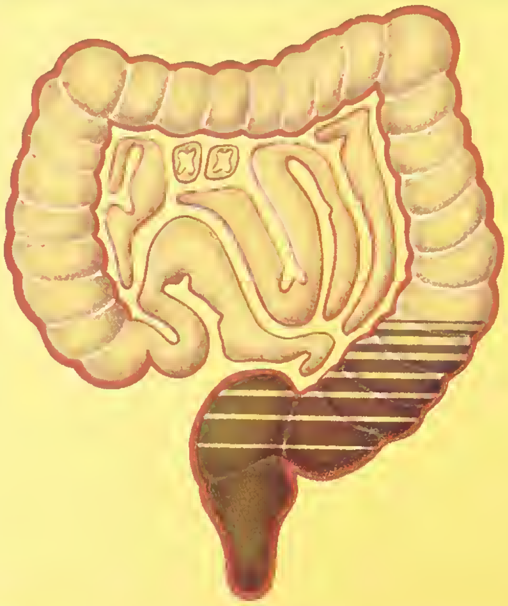

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INDICATION: For relief of constipation.

PATIENT WARNING: Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

DIRECTIONS FOR USE—ADULTS: Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours): reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

IN OBSTINATE CASES: Perdiem™ may be taken more frequently, up to two rounded teaspoonfuls every six hours.

FOR PATIENTS HABITUATED TO STRONG PURGATIVES: Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

FOR COLOSTOMY PATIENTS: To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with warm liquid.

DURING PREGNANCY: Give one to two rounded teaspoonfuls each evening.

FOR CLINICAL REGULATION: For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

FOR CHILDREN: From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

NOTE: It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

HOW SUPPLIED: Granules; 100 gram (3.5 oz.) and 250 gram (8.8 oz.) canisters.

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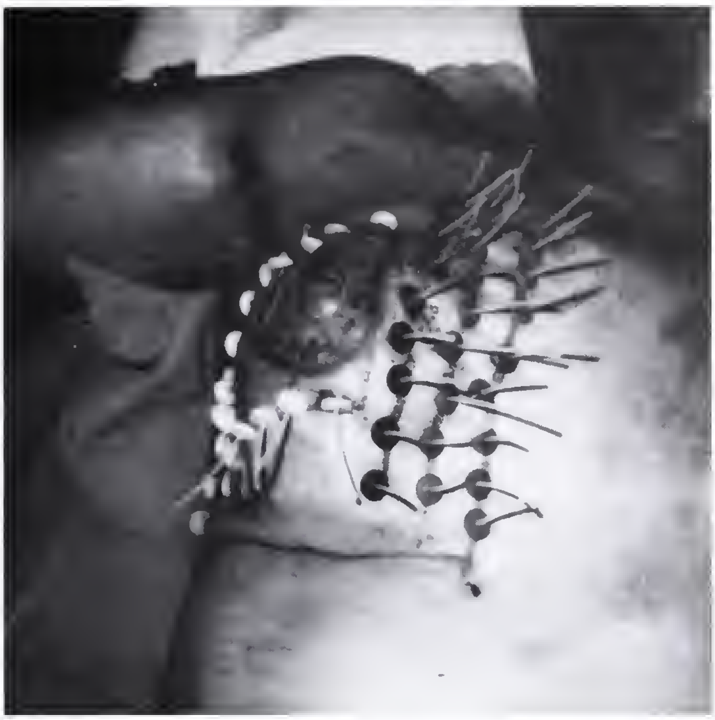


This figure demonstrates a typical curative implant for breast carcinoma, using interstitial afterloading technique with 192 Ir at Providence Hospital, Anchorage, Alaska.

Nonsmokers Demand Right to Clean Air

Smoking Ills Hit

Is there anyone around today who doesn't know that smoking cigarettes is bad for the health? That cigarettes can make you very sick? That they can kill you?

If so, he or she must be a hermit who has lived for the past 20 years in complete isolation from all others.

The serious and dangerous health results of smoking have been thoroughly aired to the American public for many years. Tobacco smoking shortens life. It is a major cause of lung cancer, heart disease, emphysema and chronic bronchitis. It is associated with other cancers, with increased risk of stroke and other circulatory diseases.

Many Americans have got the message and have quit smoking. American doctors, who see the dire effects of smoking in their patients, have led the field in stopping smoking, and only a small minority of physicians now use tobacco.

This year the American Medical Association is stepping up its long effort to inform the public of the health hazards of smoking and to urge smokers to quit, or nonsmokers not to start.

The smoker knows he or she is damaging his or her health. Smokers may claim a right to pursue their habits, but nonsmokers have at least as much right to clean air, especially in confined places like airplanes, meeting rooms and restaurants.

A person doesn't have to be a smoker himself to suffer ill effects from cigarettes. A nonsmoker in the company of a smoker breathes in smoke from the burning end of the cigarettes as well as the exhaled smoke. Some people have allergic responses to tobacco smoke and may suffer smoke-caused asthma attacks.

Nonsmokers find that tobacco smoke causes eye irritation, nasal symptoms, headache and coughing. Inhaling second-hand smoke increases the heart rate, blood pressure and level of carbon monoxide in the blood. This is particularly dangerous for those with heart and respiratory conditions.

If smoking is a personal right, it carries with it the responsibility of respecting the rights of the nonsmoker too.

November, 1979
Frank Chappell
Science News Editor
AMA

PRESIDENT'S PAGE

Possible topics for this page include a report on State Medical Board status but at the time of this writing it is very unclear how things are muddling along in Juneau. Moreover, by the time of publication, the situation may be entirely reversed.

Then, I discovered a letter from Prudential Insurance Company sitting on a corner of my blotter awaiting action. It was requesting me to be a consultant for their "Voluntary Second Opinion Program". A trip to the file cabinet produced a similar letter from the same company from the fall of 1978.

As you all should be aware, HEW is now launching a nationwide program to recommend Second Opinions on surgical patients, not only for Medicaid and Medicare but for the entire populace.

In reviewing the fine print and reading between the lines, it is my opinion that these programs are rarely voluntary and more often coercive or mandatory. Without further belaboring the point, I submit my letter written to Prudential in October, 1978, for your consideration.

October 10, 1978

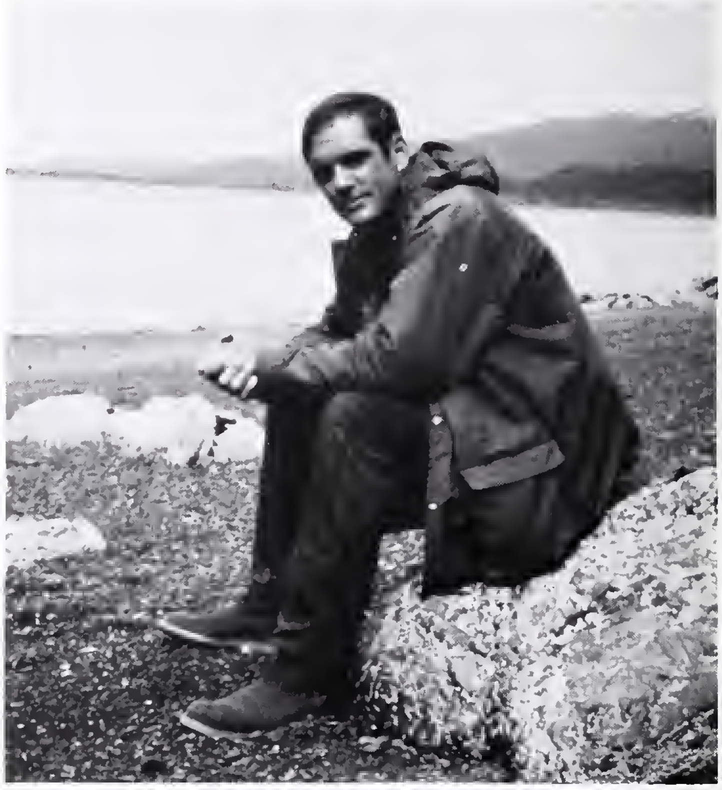
Robert D. Ketchum, M.D., Medical Director
Prudential Insurance Company of America
Western Home Office
Woodland Hills Satellite
PO Box 9010
Van Nuys, California 91409

Dear Dr. Ketchum:

This is in response to your letter concerning surgical second opinions in Alaska which is undated, but which I received on October 10, 1978.

As long as I have been in practice in the Anchorage, Alaska medical community, we have customarily used second opinions without reservation in difficult, complicated or unusual cases or also in any case where the patient evidenced any desire for a second opinion concerning possible surgical procedures.

In principal, I must object to your proposed plan which would be coercive to the patient in terms of forcing a second opinion or in terms of denying certain benefits if the second opinion differed with the patient's original treating physician. I feel this effort is counterproductive and at is worst could serve to break down essential bonds of confidence between patients and their private physicians.



Douglas G. Smith, M.D.

Let me reiterate that I have no objections to patients voluntarily or physicians voluntarily utilizing second opinions in appropriate cases, but do not feel that this is necessary in each and every case of surgery being performed.

For the above reasons, I do not feel inclined to be a formal panelist in your Surgical Second Opinion Program. On the other hand, I would be happy to see any of the patients insured by your company, if requested by the patient or requested by their attending physician, as has been our practice in the past.

I shall also, in those cases, continue to bill as I usually do, depending upon the complexity of the consultation and not some set, prearranged fee with your company.

I hope this has provided information from my point of view concerning your proposed program.

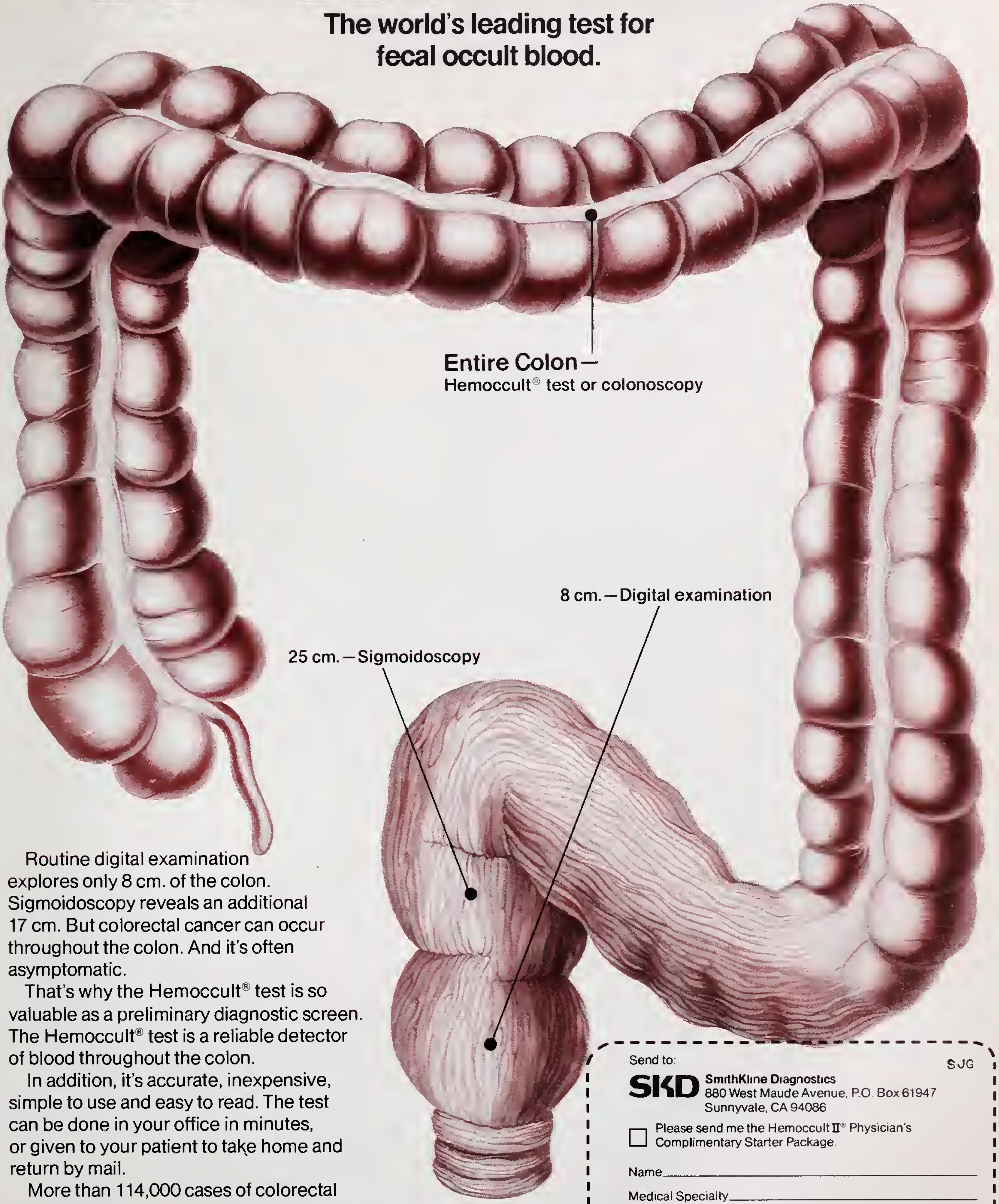
With regards,

DGS, M.D.
Orthopedic Surgeon

A great program is planned for the Annual Meeting in McKinley. Hope to see many of you there.

Hemoccult®

The world's leading test for fecal occult blood.



Routine digital examination explores only 8 cm. of the colon. Sigmoidoscopy reveals an additional 17 cm. But colorectal cancer can occur throughout the colon. And it's often asymptomatic.

That's why the Hemoccult® test is so valuable as a preliminary diagnostic screen. The Hemoccult® test is a reliable detector of blood throughout the colon.

In addition, it's accurate, inexpensive, simple to use and easy to read. The test can be done in your office in minutes, or given to your patient to take home and return by mail.

More than 114,000 cases of colorectal cancer will occur in the United States this year. The earlier they are diagnosed, the greater the chances for successful treatment. Send for your free Hemoccult® starter package, today.

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Medical Specialty________________________

Address________________________

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Hemoccult® is available through local distributors, nationwide.

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When painful spasm is the presenting symptom...

...in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

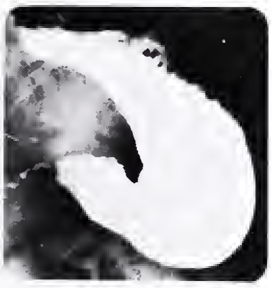
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

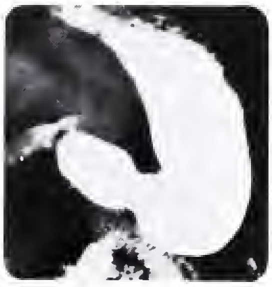
Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

---

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences–National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

For use in the treatment of infant colic (syrup)

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis WARNINGS In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating) Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy In this instance treatment with this drug would be inappropriate and possibly harmful Bentyl may produce drowsiness or blurred vision In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug PRECAUTIONS. Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy Use with caution in patients with Autonomic neuropathy Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition

Do not rely on the use of the drug in the presence of complication of biliary tract disease Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate With overdosage, a curare-like action may occur ADVERSE REACTIONS Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response The physician must delineate these Adverse reactions may include xerostomia; urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation DOSAGE AND ADMINISTRATION Dosage must be adjusted to individual patient's needs

Usual Dosage Bentyl 10 mg capsule and syrup *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children* 1 capsule or teaspoonful syrup three or four times daily *Infants* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg. *Adults* 1 tablet three or four times daily Bentyl Injection *Adults* 2 ml (20 mg) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U S A

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215 U S A

Hire More Workers, Pay Less Taxes!

Employers! You can get a tax credit of up to $3,000 each time you hire a worker eligible for the Targeted Jobs Tax Credit. And it's easy. Just hire the worker, fill in the blanks on the eligibility voucher, and drop it in the mail to your local Job Service office. No red tape, no complicated record-keeping. It makes good business sense and it helps people who need jobs.

Hire more workers, pay less taxes. Help put America to work.

Contact your local Job Service or IRS office for details on the Targeted Jobs Tax Credit.

Targeted Jobs Tax Credit

Prepared as a public service by the U S Department of Labor and the Internal Revenue Service

DELEGATE'S REPORT TO THE AMERICAN MEDICAL ASSOCIATION 1979 INTERIM MEETING HOUSE OF DELEGATES

Dear Physicians:

As you know, this was the last meeting that I will attend as your representative to the House of Delegates of the American Medical Association. It ended on a very happy note in the fact that this winter meeting was held in Honolulu in the first week of December! I guess I have come full circle - I attended the first meeting as your delegate in June 1960 in hot, humid, miserable New York City and ended up in warm, comfortable, beautiful Hawaii in December of 1979.

At this meeting, there were 272 out of a possible 277 delegates attending, so, in spite of the great distance, everyone came to Hawaii to enjoy the sunshine in the winter. The House this time considered 74 reports and 98 resolutions on a variety of issues of concern to the practicing physician.

In his opening address, Dr. Hoyt Gardener of Louisville, Kentucky called for new determination to restore public confidence in all the professions. Dr. Gardener pointed out that each physician must continue to earn the public's trust with each patient encountered. He also called for more medical family involvement in the family life and health of America and for voluntary local initiative by localized medicine for the public good. The major issues that were discussed by the House at this meeting were:

1. Reaffirmation of the Association's policy on national health insurance.
2. An initial review of the Comprehensive Report from the Council on Medical Education.
3. A new position calling for revision of the Delaney Clause of the FDA law.
4. The receipt of several reports pointing out the necessity of increased membership recruitment activities.
5. A statement opposing the use of the phrase "reasonable charge," by Medicare when the use of the phrase misleads the patients.

This meeting appeared to me to be reasonably dull in the fact that we did not have any burning issues to debate on the floor. Usually, we have had prolonged, sincere and vigorous debates over the national health insurance policy of the A.M.A. or the abortion laws or Medicare inefficiencies. All these things were discussed in one way or another at this meeting; however, in a very subdued tone.

Relative to national health insurance, which is usually in the forefront of the controversial issues before the House, it generated little debate at this meeting. The House is clearly satisfied with the Association's national health insurance policy at this time and swiftly reaffirmed the 1978 principles on national health insurance and commended the Board of Trustees for their recent actions in relation to national health insurance. As you probably know, the A.M.A. stand at this time is that the American Medical Association continue to try to maintain high quality of medical care within the framework of private health insurance. The A.M.A. and the AMPAC bodies will continue to lobby for a reasonable and livable national health insurance policy if this "raises its ugly head" again. In my opinion, the national health insurance programs have been put on the back burner over the last couple of years, essentially because of the inability of the economy of the country to fund them. So I think that we will find that HEW and various legislatures will try to get at the private practice of medicine piecemeal through other regulations and laws. The one thing that scares the H- - - out of me is the fact that, if the Congress does indeed get $230 billion in windfall profits taxes, then probably the financing of a national health insurance program will be very hot on our heels again.

The House also received a 74 page background report entitled, "Future Directions for Medical Education," which proposed sweeping changes in medical education. This comprehensive report addresses issues ranging from admission to medical school and residency training to licensure and evaluation of physicians. It states the need for restructuring of the 3rd and 4th years of medical school and the creation of a comprehensive residency, which would seem to me to be one of the old-fashioned rotating residency programs. It also wished for the establishment of a committee of public and professional "statesmen" to make policy recommendations to the Council on Medical Education.

The House adopted an important report from the A.M.A. Council on Scientific Affairs calling for a revision in the Delaney clause so that;

1. Risk/benefit assessments would be made a part of the decision-making process.
2. Alternative risks would be weighed before requiring the banning of a substance suspected of being hazardous.
3. Decision-making on food additives should be based upon the best scientific evidence available pertaining to the usefulness, function, uniqueness and potential risks of the substance and the health needs of the consumers.

Probably the major issue discussed and digested on the floor of the House and during committee meetings was that of the continuing and future membership of the American Medical Association. There are probably few issues that are more frustrating to A.M.A. delegates and others active in the national association than the continuing problem of recruiting and retaining A.M.A. members. We are aware of the important accomplishments of the A.M.A. in behalf of the profession. We are also aware of its shortcomings. There is no question in my mind that the A.M.A. is worthy of our membership and active support.

The bad news is that the percentage of the A.M.A. members against the U.S. physician population continues to decline. The good news is that the total duespaying members have shown a modest increase and especially that the medical students and resident physicians now total over 20,000 members in each category. There are apparently a good number of state and county societies that have no membership recruitment activities at all for new members. Dr. Sammons, A.M.A.'s executive vice president, urged the members of the House to ask their local societies to reexamine their membership activities. Besides this, the reference committee that considers A.M.A. financial affairs reported that, in the absence of substantial numbers of new members, Association expenses will exceed income in 1981. The high rate of inflation means that the A.M.A. must add several thousand members each year just to maintain the same level of activity.

In another vein, the Council on Long Range Planning and Development is studying various models for restructuring the Federation in an effort to resolve the long-term membership problem. We will be considering these proposals at future meetings. In the meantime, each one of us should become active membership recruiters.

One other item that was discussed at length in the House was concerning a resolution submitted by the Oregon delegation. The Oregon delegates were objecting to the use of the phrase in a publication called, "Guide to Health Insurance for People with Medicare," published by the National Association of Insurance Commissioners in the Department of H.E.W. The resolution explained that there is a strong inference that a physician who does not accept assignment and does not accept Medicare's "reasonable charge" as full payment is, therefore, making "unreasonable charges." The House, in its action, did condemn the use of the phrase, "reasonable charge," when use of the phrase misleads the patients and the public. The A.M.A. will investigate this publication and submit a report to the House at the next meeting.

We also debated and voted on many other issues, including gun control legislation, brain death legislation, treatment of chronic mental patients, foreign medical graduates and health care for refugees. I feel as though I have hit the highlights as far as the important things that were discussed in this interim meeting.

As one of my final exhortations to the members of the Alaska State Medical Association, I certainly would encourage any of you to try to take some of your time to advise your delegates on your special interests and attitudes toward A.M.A. policy or even Alaska State Medical Association policy. I think that Doug Smith and Ray Langdon, myself and a few other physicians throughout the state who have attended A.M.A. meetings, either annual or interim, find it a fascinating experience. It is a place where anyone can get up before a committee and express his own individual ideas about what he thinks should be happening in the practice of medicine in the U.S.

As I've already noted, this is my last meeting as your representative. It has been an enjoyable position to hold over all these years. I did especially enjoy the one year that I was Vice President of the American Medical Association and served on the Board of Trustees. Like any other position, it has had its ups and downs. I personally feel that I have done a good job for the doctors in the State of Alaska as their representative. I hope you will give all your support now to Dick Witt and I wish him well in his newfound endeavors.

Sincerely,
Joseph M. Ribar, M.D.

**Quote:
The AMA
doesn't
represent me.
Unquote.**

If it be true. . .
Who pressed for the federal court action that forced HEW to withdraw its November 29, 1974 utilization review regulations?

Who initiated a suit against the National Health Planning Act of 1974?

Who developed guidelines that helped many state societies press for legislative reform in medical liability adjudication?

Who provided the leadership to get the Keogh Plan liberalized to permit increased annual contributions of 15 percent of earned income or $7,500, whichever is less?

The answer to all these questions is: your AMA. The fact is, the AMA works hard—and effectively—to protect your rights and to represent your interests. With your support, it can be even more effective.

Write; Dept. of Membership Development, AMA, 535 N. Dearborn, Chicago, IL 60610 or telephone David B. Weihaupt, Director, (312) 751-6444.

**Join us.
We can do much more together.**

AMA
AMERICAN MEDICAL ASSOCIATION

HEART PROBLEM?

or other hidden medical condition...

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1980 ASMA CONVENTION

SCHEDULE

8 Hours	Scientific
8 Hours	ASMA Business
7.5 Hours	Organized Pleasure Activities

McKinley Village Lodge
McKinley Village, Alaska

THURSDAY, JUNE 5, 1980

5:00-7:00 p.m.	Arrival - Registration Booth Set-up

FRIDAY, JUNE 6, 1980

8:00-10:30 a.m.	Council Meeting
11:30-1:00 p.m.	ASMA Business Meeting
2:00-5:30 p.m.	"McKinley Run" Raft Trip or "Healy Express" Raft Trip or Hiking Trip to Hidden Lakes
5:30-7:30 p.m.	Riverside Bar-B-Q Cookout
7:30-8:30 p.m.	**SCIENTIFIC SESSION** "1980 Winter Olympics" Edward G. Hixson, M.D.

SATURDAY, JUNE 7, 1980

6:00-12 Noon	Bus Tour of McKinley Park or Raft Trip
12:00-2:00 p.m.	**LUNCH AND SCIENTIFIC SESSION** "McKinley Climbs-High Altitude Adaptation" Peter Hackett, M.D., Mr. Bob Gerhart, Rodman Wilson, M.D.
2:00-4:00 p.m.	ASMA Business Session
4:00-5:30 p.m.	**SCIENTIFIC SESSION** "Cold Adaptation-Hypothermia" Edward G. Hixson, M.D., William Mills, M.D., Peter Hackett, M.D.
6:30 p.m.	Specialty Dinner Meetings: College of Surgeons, AAFP Annual Meeting, Alaska Academy of Pediatrics

SUNDAY, JUNE 8, 1980

8:00-10:00 a.m.	ASMA Business Session
10:00-12:00 Noon	**SCIENTIFIC SESSION** "Sports Injuries" Steven Bramwell, M.D., William Mills, M.D.
12:15-1:30 p.m.	Lunch Meetings: ALPAC Annual Meeting, APRO Annual Meeting
1:30-3:30 p.m.	**SCIENTIFIC SESSION** "Sports Training-Endurance Strength" Edward G. Hixson, M.D., Steven Bramwell, M.D.
6:30 p.m.	Presidential Banquet Award Presentations

MONDAY, JUNE 9, 1980

8:00-10:00 a.m.	Business Session Council Meeting
12:00 Noon	Adjournment

The Department of Undergraduate Evaluation Provides the Following Services for AMA Members, and the Public Generally:

1. The Accreditation Status of Medical Schools in the U.S. and Canada.
2. Counseling and information concerning admission to the above medical schools.
3. Limited information regarding Foreign Medical Schools.
4. Information concerning the Rock Sleyster Memorial Scholarship for Senior Medical Students interested in Psychiatry.

AMA Department of
Undergraduate Evaluation
535 North Dearborn Street
Chicago, Illinois 60610

For additional information write to Edward S. Petersen, M. D., Director, at the above address or telephone: (312) 751-6305.

Tenuate® ©
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon [Dillon], R.H., and Leyland, H.M.: A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

Merrell

9-4672 (Y957A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® ⒸⅣ

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

Merrell

For prescribing information see opposite page.

A well-tolerated, nonnarcotic prescription for pain

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Motrin® now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		$p<0.02$	$p<0.01$	$p<0.05$	$p<0.02$	$p<0.002$

*0 = No relief 1 = Partial relief 2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

Motrin 400 mg TABLETS
ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

Upjohn

Motrin® (ibuprofen)
now proved an effective analgesic for mild to moderate pain

Motrin® **Tablets** (ibuprofen, Upjohn)

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

Caution: Federal law prohibits dispensing without prescription.

For additional product information, see your Upjohn representative or consult the package insert.

MED B-4-S

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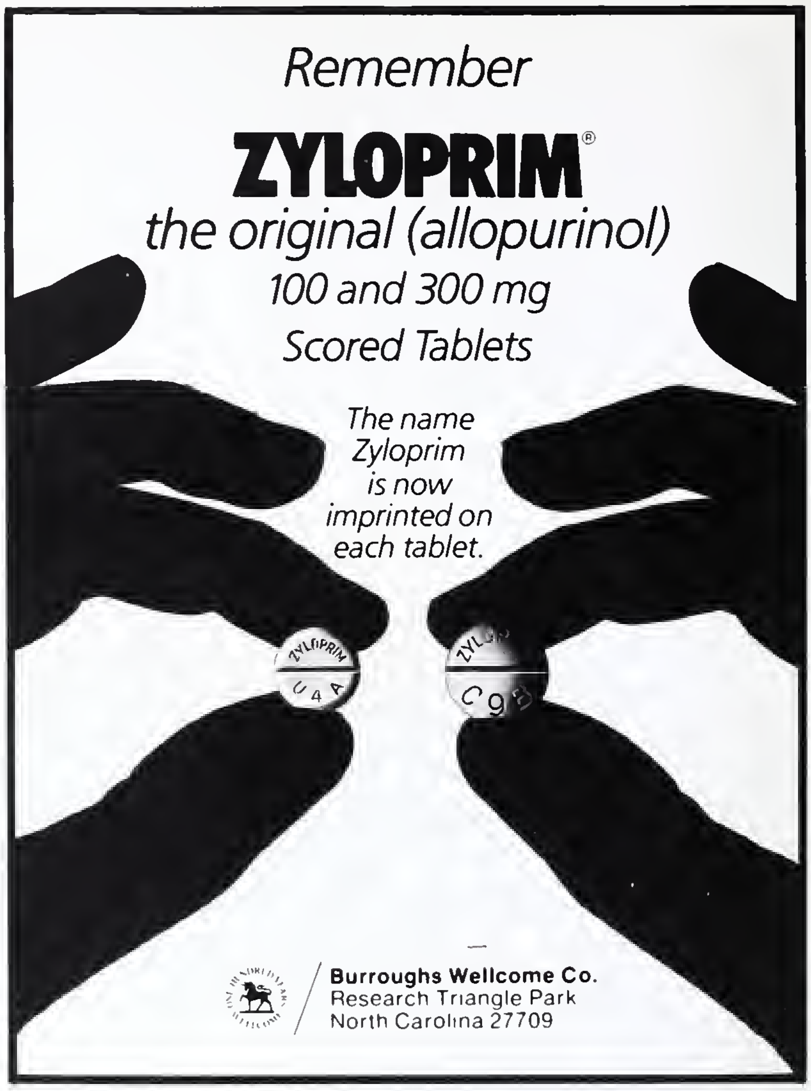

ST. PAT'S DAY: GREEN MERRIMENT

MAR.

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1980

SPRING: A NEW BEGINNING

AUGUST STANLEY WALKOWSKI, M.D.
1898 - 1979

August Stanley Walkowski, the Dean of Anchorage physicians, died this past June in the local Pioneers Home at the age of 81. He was born in Bessmer, Michigan on May 23, 1898. He obtained his Doctor of Medicine degree from the University of Michigan in 1927. Wally served his internship at Harper Hospital in Detroit in 1928 and was a surgeon at the LaTouche copper mines from 1928 to 1930. He then served as a surgeon at the Alaska Railroad Hospital from 1930 to 1939 when it closed.

Beginning in 1939, Wally was on the original staff of Providence Hospital. He practiced actively in Anchorage from 1930 to 1978 when he went into semi-retirement on admission to the Pioneers Home in Anchorage.

World War I found Wally serving as a United States Navy corpsman with the U.S. Marines in France. In World War II he was a Medical Officer with the U.S. Navy in the Aleutian Islands.

Grace McKeown, his first wife, bore him three children: Frances Ann Waters, Mary Jane Emard and Phillip McKeown Walkowski. Grace died in 1965 and he is survived by his second wife, Dodie Ervin Walkowski, of Anchorage. He has several grandchildren none of them residing in the Anchorage area.

I consider Wally the last of the "old time" doctors. He enjoyed duck hunting with his friends in the 30's and 40's, and he played a rare game of cards at the Elks Club in Anchorage where he showed up on infrequent occasion. He is most notable in his private practice for never having sent a bill to anyone nor pressing for payment in any case. He was the perfect example of old fashioned professional confidentiality. He only spoke of his patients with other doctors when in consultation and was once berated by his wife for doing the prenatal work and delivery of a friend before she even knew the friend was going to have a baby! He was never seen under the influence of alcohol although he would have a rare drink.

Wally worked hard as a boy on the farm and with extreme tenaciousness in order to get through medical school. This gave him an austere and strictly disciplined attitude which he followed throughout his life. He was always available and always on call. He never took time to play. When he did take a well-deserved vacation, he would either spend it with his family or tend to business interests. Wally was a part of Anchorage's golden age of bush flying. Being a FAA Medicial Examiner, he knew every pilot in Alaska. He was far and away the leading "mercy flight" doctor. A short excerpt from one of Alaska's news magazines of the 1930's follows. It is about two children injured at Dillingham by a falling log.

"... *Sergeant Ernest Oakley, Signal Corps Operator, radioed Anchorage and a long conversation was carried on with*

> *Dr. A. S. Walkowski of the medical staff at the Railroad Hospital. This was necessary, for Dr. Wienberg, was the only doctor in the Bristol Bay district, had been summoned by phone some days before and was hundreds of miles away.*
>
> *. . . they immediately prepared the little baby patient for a long 400 mile hop. One of the most skilled pilots of the Star Air Service, Murrell Sassen, started out for the first ski mounted plane flight of the hazardous freeze-up season. . . . In just three hours and ten minutes he lands on the frozen surface of a lake three miles from the hospital . . . and the ice was so thick - thank goodness - that the ship came safetly to rest. After careful examination by skillful Dr. Walkowski, they were wrapped in warm blankets and carried on stretchers by men for three miles out to the plane . . . the babies are on their way to recovery now and will be just as good as new when the springtime flowers bloom again . . . thanks to every known modern means of assistance given with speed and genuine Sourdough wholeheartedness!"*

Dr. Walkowski outlived many of his friends and professional associates. It was hard to get this story in our now big city of Anchorage. Aside from medicine and surgery, he served the community as President of the Anchorage School Board. In 1947 he helped solve the first "teacher's strike". He was at one time or another City Health Officer and Assistant Commissioner of Health. He was a local socialite without pretention. He was a friend to many. During World War II duty in the Aleutians, he was in charge of the Navy dispensary at Cold Bay where we were training the Russians in landing craft techniques. With probing and adroit questioning, you could bring out many interesting stories from this taciturn man about this facet of his life.

I have shared many experiences, patients and situations with Wally over a 48 year span of time. He visited me when I was in medical school. We shared duty in the Aleutians together. I last saw him during his terminal illness while in the hospital.

Howard G. Romig, M.D.

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ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

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Please see back cover.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

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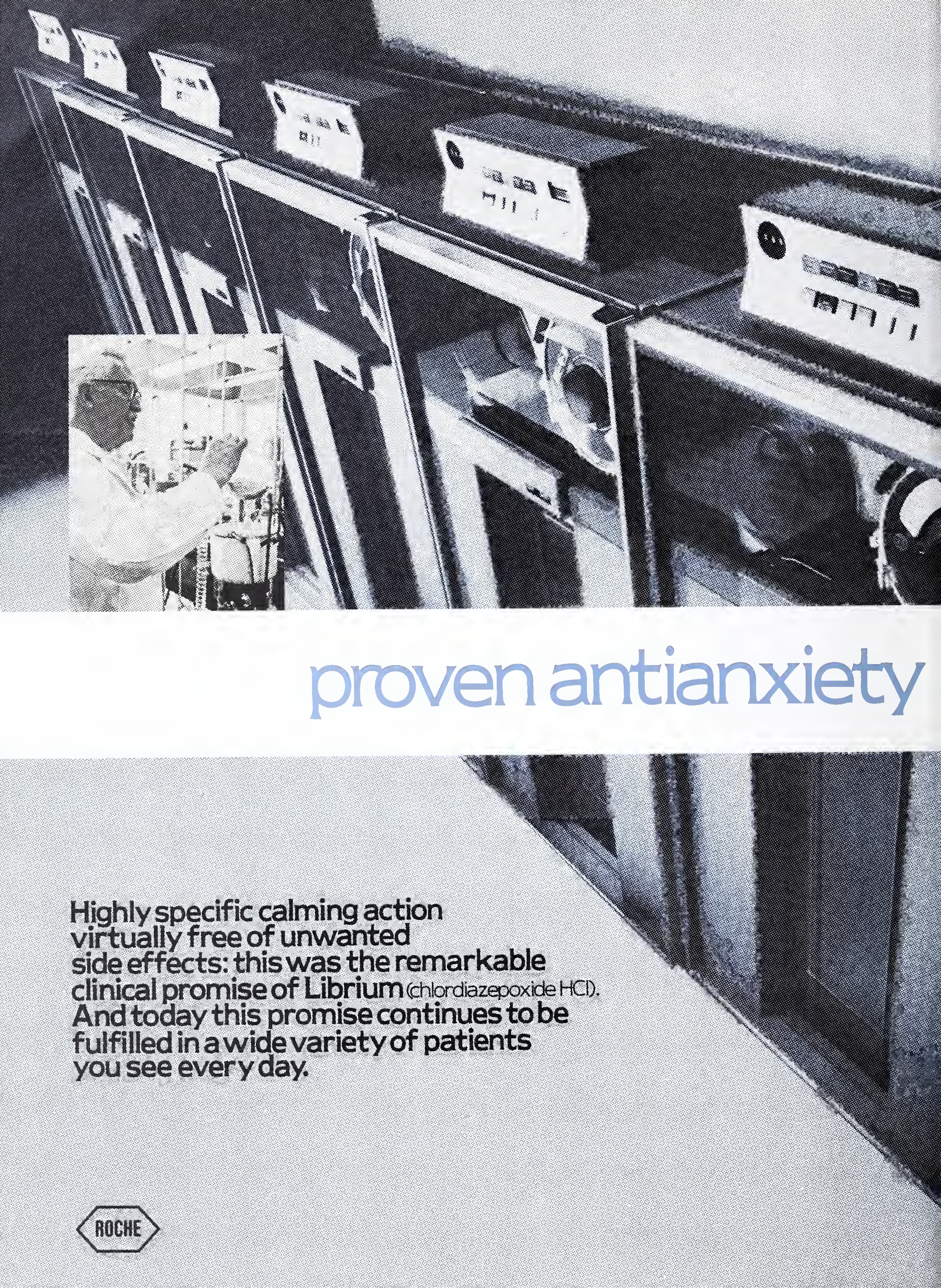

proven antianxiety

Highly specific calming action virtually free of unwanted side effects: this was the remarkable clinical promise of Librium (chlordiazepoxide HCl). And today this promise continues to be fulfilled in a wide variety of patients you see every day.

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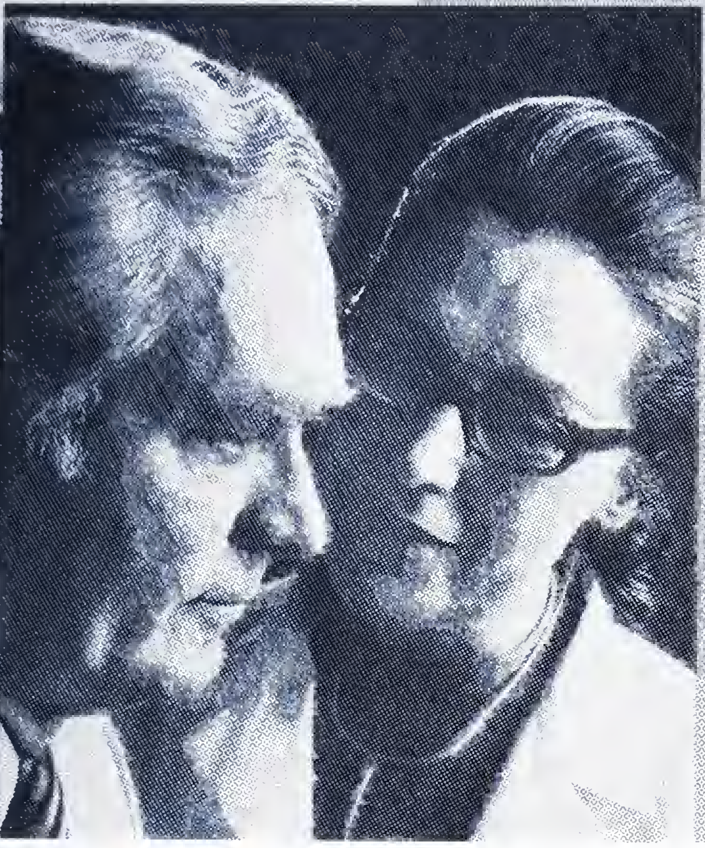


The published record on Librium is enormous. So large, in fact, it had to be put into a computer data bank and retrieval system. It's a record that shows Librium is highly effective in relieving anxiety; that Librium is seldom associated with serious side effects; that Librium rarely interferes with mental acuity at proper doses; that Librium is used concomitantly with primary medications. However, as with all CNS agents, patients should be warned against hazardous activities requiring complete alertness, and about possible combined effects with alcohol.

performance

Librium® Ⓒ IV
chlordiazepoxide HCl/Roche

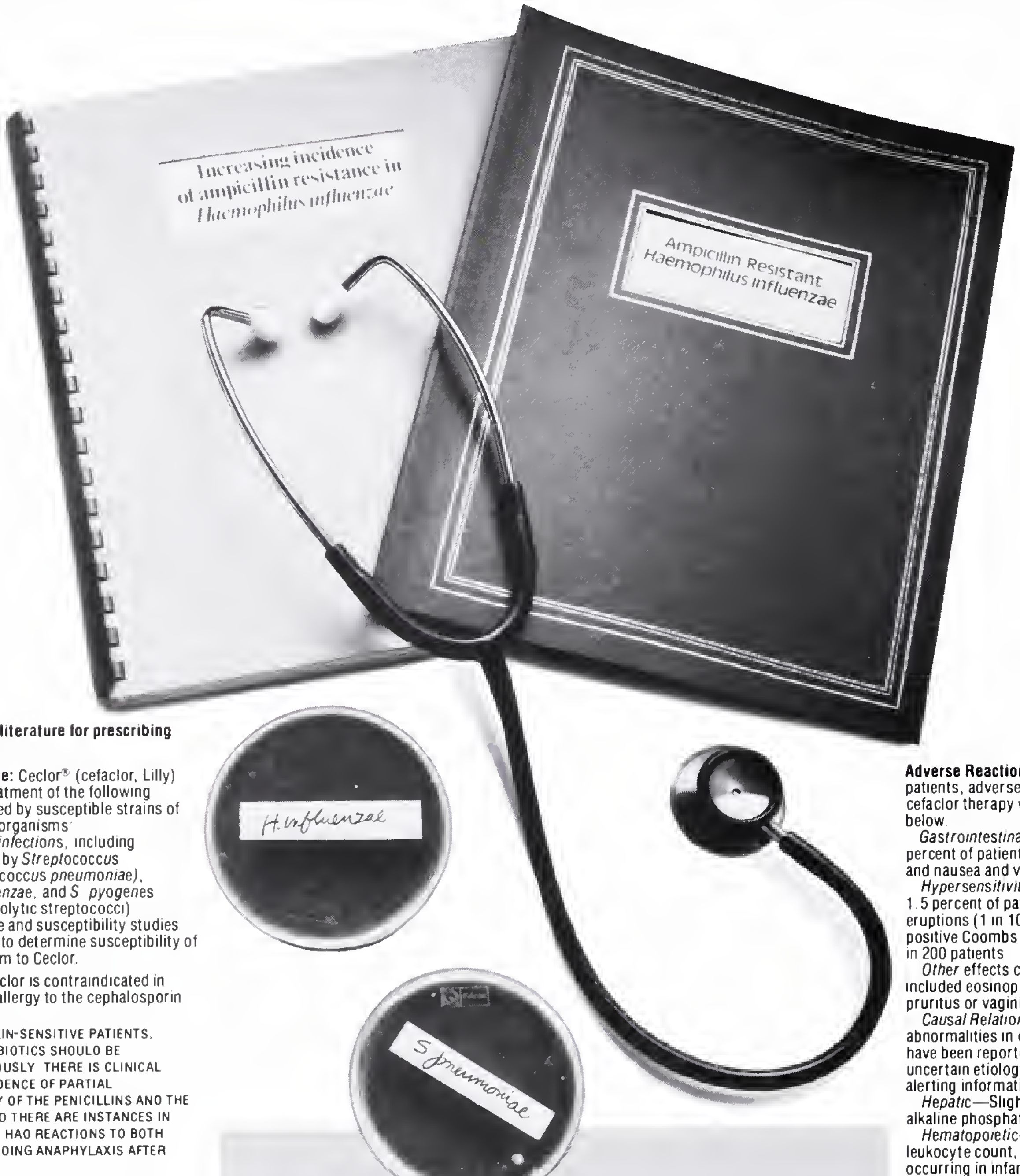
5mg, 10mg, 25mg capsules

synonymous with relief of anxiety

☐ An unsurpassed safety record
☐ Minimal effect on mental acuity, in proper dosage
☐ Predictable patient response
☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

Please see next page for summary of product information.

An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae)*, *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: In clinical studies in 1493 patients, adverse effects considered related to cefaclor therapy were uncommon and are listed below.

Gastrointestinal symptoms occurred in about 2.5 percent of patients and included diarrhea (1 in 70) and nausea and vomiting (1 in 90).

Hypersensitivity reactions were reported in about 1.5 percent of patients and included morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occurred in less than 1 in 200 patients.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory tests results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [070379R]

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*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.[8]

Note: Ceclor® (cefaclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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PHYCHIATRIC TRAINING FOR MEDICAL STUDENTS AND RESIDENTS IN ALASKA: THE WAMI COMMUNITY CLINICAL UNIT

Wayne Katon, M.D.
Catherine Dunn, M.D.
John Bokan, M.D.
Burton Reifler, M.D.
Robert Kraus, M.D.

This paper describes a training experience for psychiatric residents and medical students at the University of Washington School of Medicine. The program is based in Anchorage, Alaska and the training is conducted conjointly by the Department of Psychiatry and Behavioral Sciences of the University of Washington, the Washington, Alaska, Montana and Idaho WAMI Program for medical education at the University of Alaska Fairbanks and the psychiatrists of Alaska as represented by the Alaska Branch of the American Psychiatric Association. The paper will outline the structure of the program focusing on certain unique aspects of the setting and clinical experience that distinguish it from psychiatric programs in urban settings.

This training experience is a component of the WAMI Program which includes four western states: Washington, Alaska, Montana and Idaho. The program began in 1971 as an experiment in decentralized medical education. Its objectives include improving the health of citizens in the WAMI states through peripheralized medical education, changing the maldistribution of physicians in the WAMI region, broadening the educational experience of future physicians through the use of clinical resources in communities and improving and expanding continuing medical education programs for health care professionals in rural areas. The WAMI program consists of two phases, the University phase in which medical students receive their first year of training in rural college settings and at the University of Washington, and the Community phase in which students and residents receive a portion of their training in communities in the four-state region. These

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Wayne Katon, M.D., Chief Resident Acting Instructor; Catherine Dunn, M.D., Child Psychiatry Fellow; John Bokan, M.D., Instructor; Burton Reifler, M.D., Assistant Professor; Robert Kraus, M.D., Professor and Acting Chairman, Department of Psychiatry and Behavioral Sciences, University of Washington Medical School, Seattle, Washington.

We wish to acknowledge the contributions of Michael Graf, Ph. D. and Hal Sexton, M.D.

"Community Clinical Units" have been established in those disciplines for which there is a need and in which physician manpower is currently maldistributed in the WAMI states. The Anchorage Alaska Community Clinical Unit in psychiatry was established in January 1974 to meet such a need in Alaska as well as other rural sites in Washington, Montana and Idaho. As of 1979, 57 medical students and 10 residents have rotated successfully through the Anchorage Community Clinical Unit.

The Alaska District Branch of the American Psychiatric Association is the planning group for the rotation in Anchorage. This branch is distinctive in that its membership comprises all the psychiatrists in Alaska. Therefore in its planning for the student resident rotations the branch is able to include all of the major components of psychiatric practice in Alaska, both public and private. Over time the rotations have included travel to various villages and towns in "bush" areas of every section of Alaska.

Description of Program:

The rural setting in Alaska is unique to its tremendous geographical, ecological and cultural diversity. Alaska has 586,000 square miles of territory (almost three times the size of Texas) with the ecological diversity ranging between extremes like the rainforest in Southeast Alaska with its moderate temperatures and often greater than 150 inches of rainfall and the Alaska interior where temperature ranges are among the most extreme in the world between – 70° in the winter to 100° in the summer. The cultures of Alaska are also heterogenous and include Caucasian, Asian, Black and Native. Among the Natives alone, there are Yupik and Inupiat speaking Eskimos, Aleuts and Athapaskan, Tlingit, Haida and Tsimpshian Indians. These groups are historically, linguistically and culturally distinct and have adapted to life in natural environments that are quite different. Unlike aboriginal Americans in other states, Alaskan Natives have never been subjected to the experience of living on reservations. Their history of involvement with non-native groups is comparatively short and yet much of their culture has been intensively affected in recent years. Thus, Natives are facing problems with adapting to the conflicting aspects of Western and Native cultures. There is also the problem, faced by both Native and Caucasian, of rural subsistence life styles being effected by decreasing wildlife and increasing Federal and State restictions on hunting, fishing and mining.

The clinical experience has been made available to psychiatry residents (who have had at least one year of psychiatry) as a 6-month rotation and to 3rd and 4th year medical students as a 6-week rotation involving full-time work and temporary residence in Anchorage. Housing is provided and paid for by the WAMI program.

The clinical experience of students and residents occurs at essentially all of the major psychiatric institutions in Alaska including Alaska Psychiatric Institute, Elmendorf Air Force Base, Fort Richardson Army Medical facility, various offices and clinics in the private practice sector and Providence Hospital. Because of the diversity of these institutions and the various private practices, the residents and students experience a wide range of general psychiatric experience including forensic psychiatry, child and adolescent psychiatry, family therapy, individual and group adult therapy, inpatient psychiatry, consultation-liaison experience and experience with drug and alcohol abuse. The resident and medical students are supervised in these varied experiences by private practitioners and psychiatrists in each intitution.

Rural and cross-cultural experience is provided by work in the Alaska Native Medical Center, various other components of the Alaska area Native Health Service and Rural Community Mental Health Clinics including those in Kodiak, Cordova, Ketchikan, Juneau, Bethel and Anchorage. Traveling to bush areas in Alaska to work with other health professionals is also an intergral part of the experience. The travel includes working under the supervision of rural practitioners who have reponsibility for patient care and who provide teaching. Residents and medical students can take two to six of these bush trips which are usually from several days to one week in length. They are supervised actively by a senior psychiatrist who usually accompanies or debriefs them immediately afterwards. Exposure to native experts and a clinical anthropologist/psychiatrist are both essential aspects of this cross-cultural training. In some instances residents have been able to work on an ongoing basis with Native Health Corporations in the area of program development and planning.

Another aspect of the training program involves the active participation, supervision and consultation of members of the faculty of the Department of Psychiatry and Behavioral Sciences of the University of Washington. Alaskan psychiatrists and psychologists who are participating in the training also have the option of accepting clinical faculty appointments in the Department of Psychiatry and Behavioral Sciences. Currently fifteen Alaskan psychiatrists and psychologists hold active appoinments in ranks ranging from clinical instructor to clinical professor. A psychiatrist or psychologist from the department in Seattle visits the Community Clinical Unit every four to six weeks and assists in the supervision of the resident and medical students in their training. One of their functions is to help structure their clinical experiences at the varied sites so that balanced programs develop. These visiting faculty also work with local faculty on providing seminars and teaching programs as part of the continuing medical education of the Alaska District Branch. Each clinical faculty member gives a scientific presentation at an Alaska District Branch psychiatric meeting and visits all of the psychiatric institutions in the Community Clinical Unit at which medical students and residents are training. At these institutions the faculty member frequently participates with local faculty and trainees at clinical case conferences. This aspect of the program enriches resident and medical student teaching and also contributes significantly to the continuing medical education program of the Alaska psychiatric community.

Conclusion

We have outlined a psychiatric training program for residents and medical students at the University of Washington Medical School that enables medical students and residents to live in Alaska and assist in the treatment of mentally ill children, adolescents and adults both Native and white in a variety of urban and rural settings. Our feeling is that this training program is an exceptional experience in that Alaska provides an extremely heterogenous cultural and geographical setting.

The impact on the residents who have been in this six-month training experience has been profound in terms of career choice. Of the eight residents who have completed their training two went into private practice in Alaska, one will enter practice in an Alaskan public institution, one is currently consulting in Southeast Alaska and is considering a full-time practic in Anchorage and one is in a rural private practice in the Pacific Northwest. Three others have entered academic practice at the University of Washington Medical School with all three actively involved with cross-cultural research and clinical practice.

To date two psychology interns have also participated in the training program. Subsequently both accepted positions as directors of rural Alaskan community mental health centers. With reference to the medical students who trained in the Community Clinical Unit, it is still too early to predict choice of career or geographical location of practice. In recent years, a sizable percentage of medical students in the Anchorage Community Clinical Unit have been Alaskan residents who took their initial year of medical school in the University phase of the WAMI program at the University of Alaska in Fairbanks. The majority of these students express a preference to return to Alaska to practice medicine on completion of specialty training.

The results of the program have been rewarding to the Alaska psychiatric community in terms of active continuing medical education with closer ties to the University of Washington clinical faculty. A previously untapped resource, the teaching potential of the psychiatrists of Alaska, has been utilized in a positive and constructive manner with the result that some of their medical students and residents are making a commitment to practice in Alaska. These physicians, as part of their experience in the Alaskan Community Clincial Unit, have acquired certain specialized skills necessary for effective practice in Alaska which are not commonly acquired by physicians trained in urban settings.

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BLOOD CHANGES IN MEN STRESSED BY A 1049 MILE SLED DOG RACE

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Abstract

The authors studied blood changes in men (n=5) stressed by participation in an extreme endurance test, the Iditarod Trail Sled Dog Race. This competition spans 1049 miles of Alaskan interior and involves a unique set of stressors including prolonged exertion, cold exposure, rugged terrain, disruption of sleep patterns and dietary changes. The race is continuous save one required 24 hour rest and usually requires 2-3 weeks to complete. In the immediate post race period, blood changes from pre-race (e.g., baseline) determinations included: 1. decrease in the hemoglobin concentration which appeared to result from expansion of the plasma volume; 2 . decrease in levels of T_4 *and plasma cortisol; 3. decrease in cholesterol and serum protein; and 4. increase in muscle enzymes. No significant changes were observed in other measures including prolactin, 17-ketosteroids, uric acid and electrolytes. Three weeks after the finish most altered parameters had returned to pre-race values, though cholesterol levels had rebounded above baseline. The pattern of change suggests a generalized lowering or attenuation of physiological responsivity in men stressed by an extreme endurance test.*

A broad range of physiological change has been observed in studies of stressed animals and humans. 1. Many of these investigations have focused upon changes in endocrine function, and Mason has presented evidence of intergrated organized patterns of endocrine response in stressed animals. 2. Alterations in serum chemistries have also been studied as concomitants of stressful situations (3-5). Physiological change in subjects stressed by competitive endurance tests, such as marathon races, has been reported in detail (reviewed 6, 7). There are, however, few data describing physiological change in men stressed by more prolonged and extreme tests of competitive endurance (6).

The Iditarod Trail International Sled Dog Race is an annual Alaskan competition which spans the 1049 miles from Anchorage to Nome. Each March participants (called "mushers") require two to four weeks to complete the race. They reduce the dog teams' work and max-

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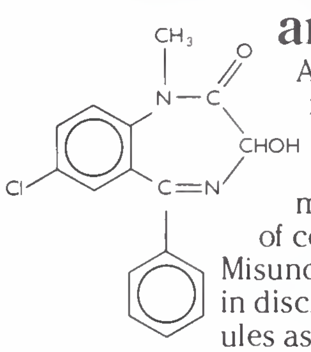
Supported in part by the Stress Grants Program, Roche Psychiatric Service Institute, Roche Pharmaceutical Company, Nutley, New Jersey.

The authors wish to thank the Iditarod Trail Committee, the mushers and Dr. Charles Moldrow.

Aspects of Management

What to tell your patients when you prescribe Valium® (diazepam/Roche)

Survey shows significant correlation between comprehension and compliance



A study of compliance patterns reveals that more than 6 out of 10 patients made errors in self-administration of prescribed medication, largely due to lack of comprehension.* Misunderstanding of directions resulted in discrepancies in dosage schedules as well as in length of therapy. Since evidence suggests that expanded verbal instructions may encourage compliance, the patient receiving Valium can benefit from your explanation of the dosage regimen, what response to expect from therapy and when to expect it.

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Your patients should know that 1) you are prescribing Valium as an adjunct to an overall program for the treatment of anxiety, and 2) Valium is given to relieve the symptoms of excessive anxiety and psychic tension while you help the patient to explore and deal with the underlying cause of his psychic tension.

Patients often interpret manifestations of anxiety, such as palpitations, hyperventilation, fatigue and muscle tension, as symptoms of a serious disease. However, when they learn that these symptoms can be relieved by Valium therapy, patients can more readily understand the psychosomatic origin of their symptoms and to accept the nonpharmacologic measures you may recommend.

The time you devote to these explanations can be a therapeutic measure in itself. Most anxious patients respond to and benefit from a frank discussion with an objective, sympathetic professional.

At the start of treatment, establishing therapeutic goals helps the patient to learn *what* to expect and *when* to expect it. Patients should also be informed that the medication will be gradually reduced and discontinued upon attainment of the therapeutic goal.

Tapering of dosage is rarely necessary in short-term therapy, but when consistently higher doses are used for extended periods, patients should know that the gradual reduction of medication will be implemented in order to avoid sudden recurrence of symptoms or possible withdrawal symptoms. Such recurrence is unlikely when the causes of the anxiety have been worked out satisfactorily within your overall treatment program.

What Valium (diazepam/Roche) can't do

It should be emphasized that there is no "magic" in any antianxiety tablet; that medication is not prescribed as a problem solver. Instead, Valium is being prescribed *as a temporary measure to relieve symptoms* generated by excessive anxiety and psychic tension.

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* Boyd JR, *et al*: *Am J Hosp Pharm 31*: 485-491, May 1974

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety associated with anxiety disorders, transient situational disturbances and functional or organic disorders, psychoneurotic states manifested by tension, anxiety, apprenhension, fatigue, depressive symptoms, or agitation, symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy)
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage In Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics,

Practical pointers on taking antianxiety medications

do's Patients should be instructed to keep to their dosage schedule exactly as prescribed. If they miss a dose, they should not try to make it up by taking two doses the next time. Ask them to contact you promptly if they experience worrisome side effects. Explain that drowsiness is a common reaction to almost all calming agents, but that it usually subsides in a few days. Urge the patient to contact you for a possible dosage adjustment if drowsiness or other reactions persist.

Just as you request a complete list of all medications the patient is taking, suggest that this list be given to any other physician treating her/him.

Like all medicines, Valium should be kept out of reach of children and young people. Old or unused medication should be discarded.

and don'ts Since drowsiness is an occasional problem, patients should be advised against driving or operating hazardous machinery until they see how the medication affects them. They should also know that tranquilizers increase the effects of alcoholic beverages, which should therefore be avoided. Also, warn patients against simultaneous use of drugs that depress the central nervous system, particularly sedative hypnotics.

Patients should be aware of the importance of not sharing their medications with friends and neighbors; they should know that what you have prescribed for them may be contraindicated for others.

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barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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imize performance by running behind their sleds for approximately one third of the race. Sleds loaded with supplies must frequently be pushed uphill during long segments of the trail. In addition to prolonged exertion, the mushers must contend with stressors including extreme climatic conditions (e.g., temperatures down to – 45° C and windchill factors down to –90° C), rugged terrain, threats of frostbite and hypothermia, and sleep deprivation. The race is continuous save one required 24 hour rest stop. Since inception of this extreme endurance test in 1973, more than one fourth of all starters have failed to finish.

We have previously demonstrated the predictive utility of recent life changes regarding competitors' Iditarod performance (8). We have also examined behavioral changes arising in response to this competition (9, 10). In the present study, we examined blood changes in men after completion of the 1977 Iditarod race. From parameters shown to change in subjects stressed by competitive exertion of shorter distance (7) or other arduous circumstances (3-5, 11-16), we chose to study: 1. hematological measures; 2. a group of endocrine functions; 3. muscle enzymes; and 4. serum chemistries, specifically cholesterol, uric acid, and proteins. We report here the principal blood changes in human subjects stressed by a unique set of conditions and an unusually prolonged competition (e.g., 1049 miles and 2-3 weeks).

Methods

Selection of participants. The study was approved by the Human Experimentation Committee of the University of Minnesota and the principles of the Helsinki Declaration were followed. Five mushers were selected for study based on successful completion of prior Iditarod races and proximity of residence to Anchorage. Each subject gave informed consent and was paid for participation in the study. All were male Caucasians with a mean age of 38.0 (range 24-60) years, mean weight of 74.4 (range 65.0-81.8) kilograms, and mean height of 1.78 (range 1.68-1.85) meters. All were in excellent health, not using medications, and were non-smokers. Preparation and training by the subjects began 8 months prior to the start of the 1977 Iditarod race and mean training kilometers mushed was 1250 (range 725-1925).

Methods of sampling. Blood and urine samples were obtained at four times: Sample 1 — the day of arrival in Anchorage; Sample 2 — the day prior to start of the race and three days after sample 1; Sample 3 — upon completion of the race in Nome; Sample 4 — three weeks after finish. Each sample included: 1. a venipuncture utilizing sterile technique to obtain 25 ml of blood and 2. a 100 ml aliquot of freshly voided urine. Sample 1 served as a control for the immediate pre-race sample. Samples were collected at approximately the same time of day and a minimum of three hours after eating. All samples were collected by the same technician who promptly performed requisite separations, prepared blood smears, and transported specimens to the Alaskan Medical Laboratory (Anchorage, Alaska) for analysis within 24 hours.

Laboratory methods. Endocrine and isoenzyme studies were later performed by Reference Laboratory (Newbury Park, California). Five endocrinological parameters were determined for each sample. Seventeen ketosteroids were measured using a modification of the method of Klendshoj et al. (17). Plasma cortisols were determined by radioimmunoassay (unpublished, Endocrine Sciences). A modification of the technique of Hwang et al. (18) was used to determine prolactin levels. Thyroxine (T_4) was measured by a competitive binding assay based on the method of Thorson et al. (19) and T_3 uptake was performed by a radioactive method described by Sisson (20). Creatine phosphokinase (CPK) isoenzymes were detected by a flourescent technique following electrophoresis in agarose based on Elevitch's procedure (21). Urinalyses were performed by standard techniques. Toxicology screens for alcohol, opiates, barbiturates, amphetamines, salicylates, and phenothiazines were performed on each urine sample. A battery of 24 serum chemistry measures was obtained utilizing the Technicon SMAC system. Hematologic parameters were measured on a Coulter Counter (Model S). One of us (JE) reviewed all blood smears to assess red cell morphology, evidence of polychromasia, white cell differentials and platelet estimates.

Red cell chromium ^{51}Cr survival studies (22) were performed during the 1978 race to clarify observations made during the 1977 race. Two of the 1977 subjects were slected for participation after informed consent. Fifteen ml of venous blood were drawn aseptically into a syringe containing acid citrate dextrose (ACD) solution, and 200 uCi of sodium chromate ^{51}Cr were added. Following 30 minutes incubation at 25°C, 50 mg of ascorbic acid were added to reduce the untreated sodium chromate. Exactly 10 ml of the tagged red cell suspension was re-injected into the subject. Twenty-four hours after injection a sample was withdrawn for a zero time determination. A red cell survival curve was generated by drawing 10 ml of blood into sterile containers at the start of

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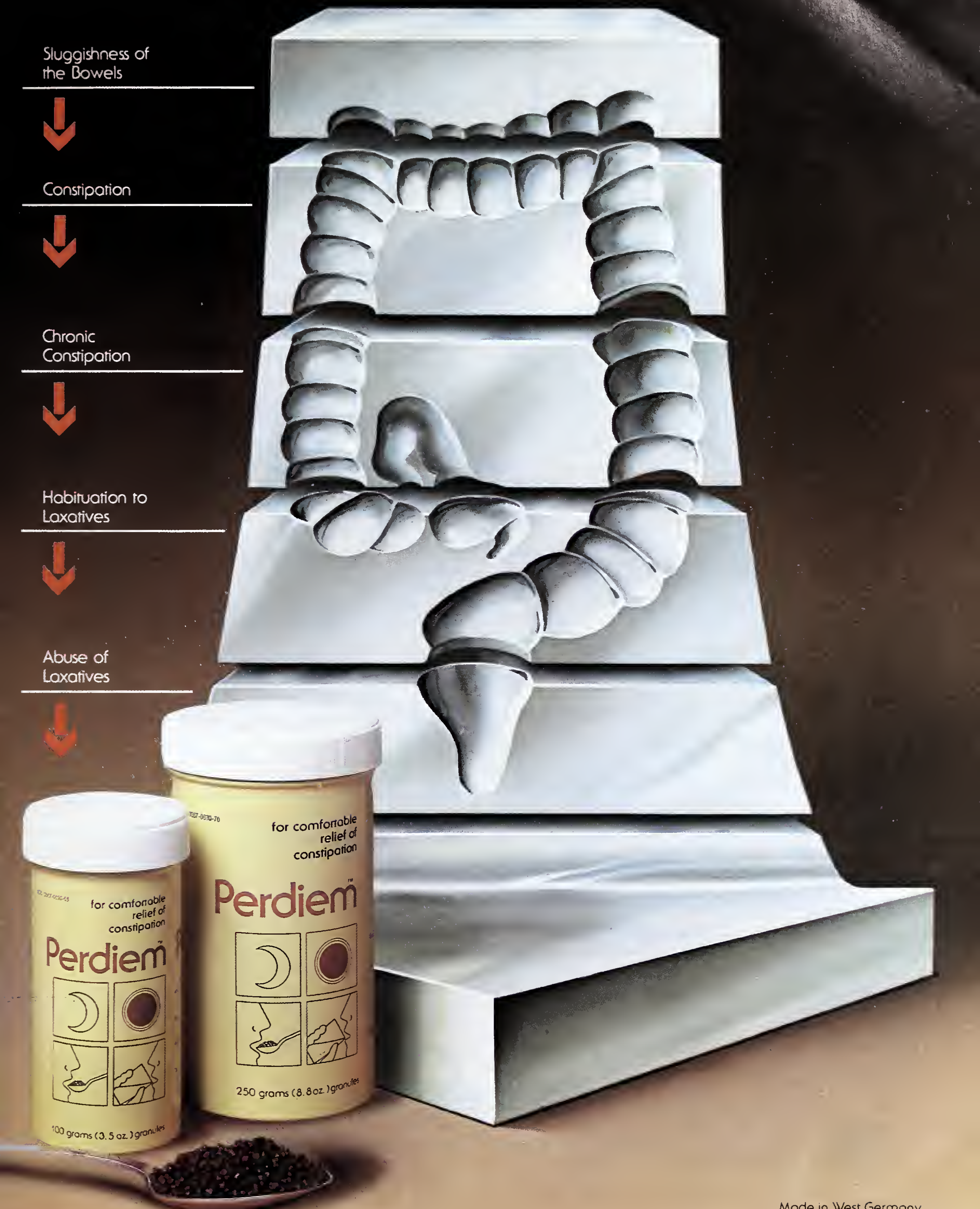
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DURING PREGNANCY: Give one to two rounded teaspoonfuls each evening.

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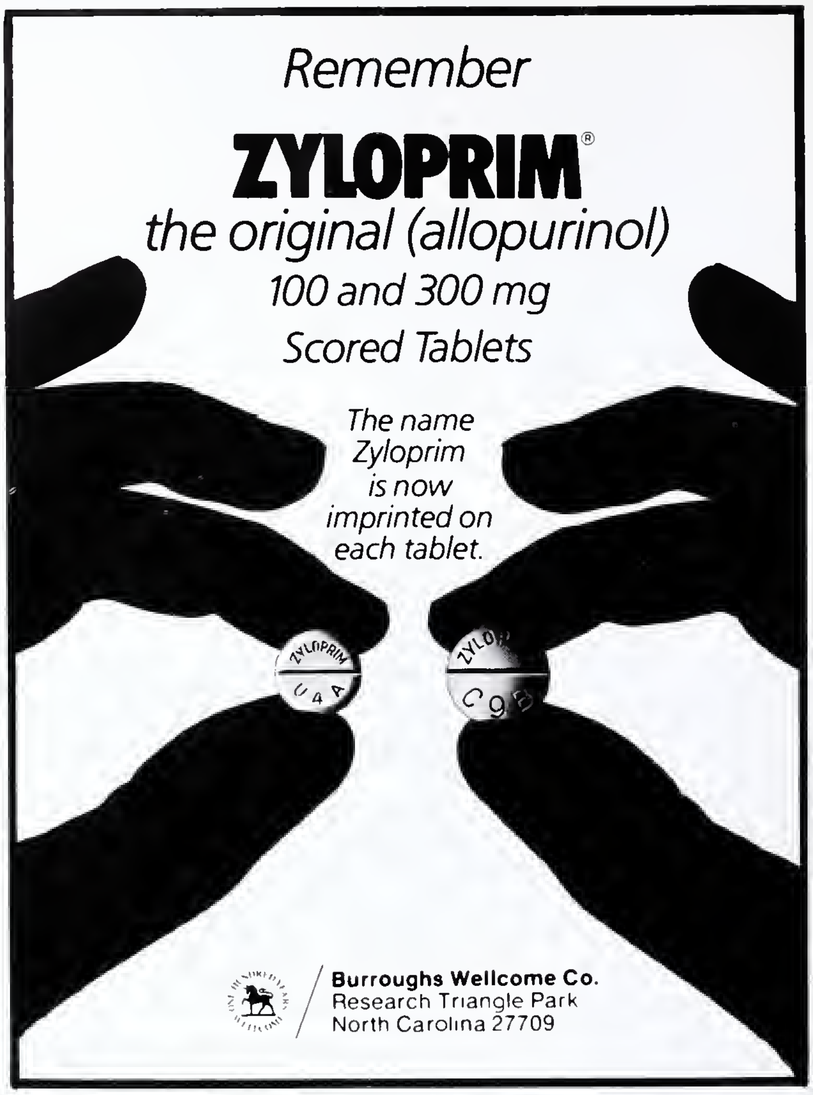

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the race, at two intermediate check points and on finish in Nome. Hematocrits on all samples were determined immediately, and 4 ml of each sample were counted in a gamma counter (Auto-Logic, Abbott Laboratory) at the same time to negate the effect of radioactive decay. The percent remaining was plotted on a semilog scale versus time.

% remaining =
(Net whole blood count /Net whole blood count
(sample)
x Hematocrit /Hematocrit) x100.
(24 hours) (24 hours) (sample)

Statistical analysis. Results are reported as the mean for the 5 participants and the variance as the standard error of the mean. Significance of differences were determined using small-sample paired t-tests (23).

Results

Performance of the subjects and conditions. All subjects completed the 1049 mile race within 22 days of the start. They placed 5th, 6th, 19th, 20th and 29th among the 36 finishers from an original field of 46. Ambient temperatures along the trail ranged from − 25°C to 15° C with winds up to 30 kilometers/hour. Subjects' diets during the race were idiosyncratic, but all reported high protein intake by design. Four of the five utilized large amounts of caffeine, particularly in latter part of the race. Sleep was estimated at 5 hours per night in the first two-thirds of the race and 2-3 hours per night in the final drive to Nome.

Hematologic parameters. As shown in Figure 1, a significant decrement in hemoglobin concentration occurred. The mean hemoglobin concentration fell 2.0 grams/dl during the race and returned to baseline by 3 weeks after the race. Paralleling this decrease in hemoglobin, the hematocrit fell 4.8% and the red cell count fell 0.62 x 10^9 cells/liter. There was no change in the red cell mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), or mean corpuscular hemoglobin concentration (MCHC). Similarly there were no significant changes in the white blood cell counts or differentials, the reticulocyte percentages or platelet estimates. No bleeding or hemoglobinuria was detected or reported. Red cell morphology remained normal and specifically showed no evidence of fragmentation or spherocytosis.

The chromium survival studies performed on the two subjects during the 1978 race showed normal red cell survivals (Fig. 2). The projected T ½ values from points obtained during the race were 34.5 and 36 (normal values: 28 to 40) days. Despite the normal red cell survivals, hemoglobin concentration in the participants decreased 1.0 and 1.4 grams/dl respectively.

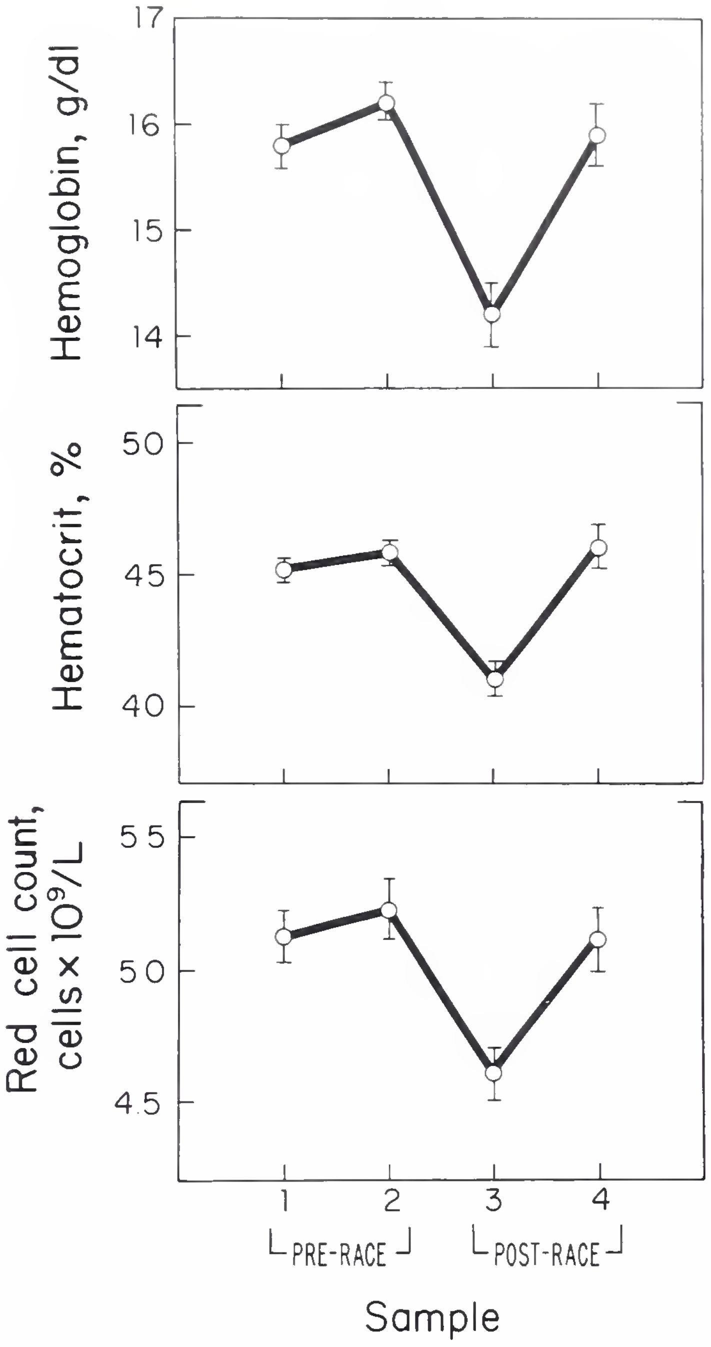


Figure 1. Mean values of hemoglobin, hematocrit and red cell count obtained before and after the race. Samples represent: 1-sample on arrival in Anchorage; 2-sample one day prior to race; 3-sample upon finish in Nome; 4-sample three weeks post-race. Vertical bars represent ± S.E.M.

Endocrine measurements. Thyroid function tests demonstrated a significant reduction in the immediate post-race T_4 (Table 1). As there was no significant change in the T_3 uptake during the race, the free T_4 index also fell 2.5 mg/dl. Although rising slightly to 6.2 ± 0.6 mg/dl, the T_4 level remained depressed three weeks after completion of the race. Mean cortisol fell from normal in the pre-race sample to below normal in the immediate post-race sample (Table 1). In fact, three of the subjects had post-race values which were less than 2.5 ug/dl. Samples were both collected in the early evening, therefore, it is unlikely that this variation resulted from circadian changes in cortisol

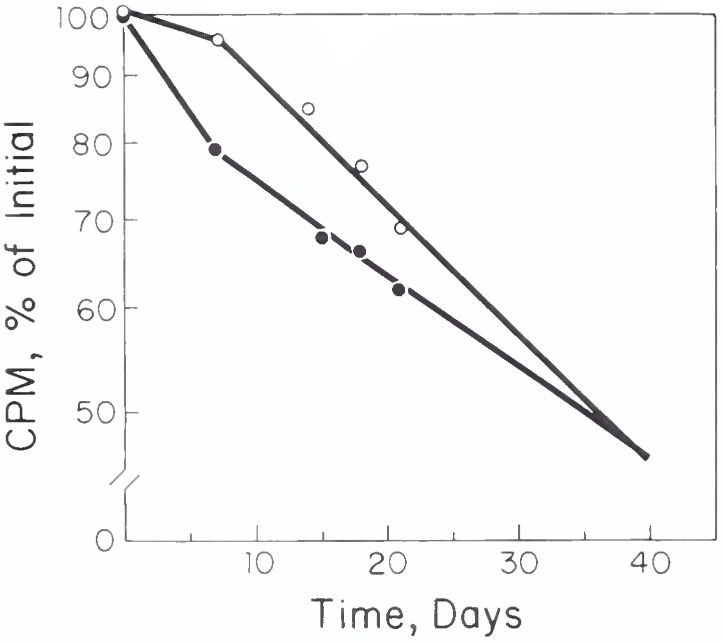


Figure2. Semilog plot of the red cell survival in two subjects during the 1978 race. Points represent percentage of initial CPM corrected for changes in hematocrit. See methods for details.

levels. The 17 ketosteroid levels were the same before and after the race (mean: pre-race = 13.6 ± 1.2 mg/l; post-race = 11.1 ± 2.3 mg/l). Of note is the lack of change in prolactin levels (Table 1).

Enzyme studies. Results of the enzyme determinations are summarized in Table 1. Creatine phosphokinase (CPK), serum glutamic-oxalacetic transaminase (SGOT), and lactic dehydrogenase (LDH) rose during the race. CPK isoenzyme studies demonstrated elevation in CPK-3 and no detectable CPK-1 or CPK-2. All values had returned to normal by the three week post race determinations. Alkaline phosphatase levels decreased significantly during the race and remained depressed at 61.0 ± 3.6 IU/dl three weeks after the race.

Serum chemistries. The most striking change in the serum chemistries was a decline in the mean cholesterol of 41 mg/dl during the race (Fig. 3). Also of note is the marked rebound in cholesterol which occurred by the final sample. Three weeks after the race, mean cholesterol was 65 mg/dl higher than the immediate post-race value and 45 mg/dl higher than the baseline value.

Serum electrolytes, BUN, creatinine, calcium and phosphorus remained unchanged during the race. The total protein fell and most of this change resulted from a fall in albumin (Table 1). Of note was the lack of significant change in the serum uric acid levels (Table 1).

Urine studies. Toxicology screens were negative on all samples. Urinalysis revealed a post-race specific gravity of 1.027 ± 0.002 which was not appreciably different from the pre-race value of 1.025 ± 0.002. Calcium oxalate crystals were detected in the urine of 4 of 5 subjects immediately after the race.

Discussion

Several significant blood changes were observed in men after the 1049 mile Iditarod Trail Sled Dog Race. In reviewing these findings, three points should be kept in mind. First, subjects had trained (if variably) for the competition, mushing between 700-1900 practice kilometers over a period of months prior to the race. Second, long distance mushing was not novel to these men, but alone in the unforgiving Alaskan interior in winter, each musher's survival was threatened. Third, a combination of stressors was involved and likely influenced the results. This included extreme and prolonged physical exertion, rugged terrain, cold exposure, disruption of normal sleep patterns, altered diet and handling and care of upwards of 10 dogs. It is beyond the scope of the current study to assess the relative contributions of the individual stressors to the observed changes.

Among the striking changes observed was the marked decrease in hemoglobin concentration in all participants during the race. This appears consistent with recent reports of athlete's anemia (24, 25) emerging with less prolonged and less extreme exercise. Other studies have demonstrated either hemodilution or hemoconcentration may occur during physical exertion (26, 29). Such conflicting observations have been ascribed to variables including intensity and duration of exercise, degree of physical training and level of hydration (30). In our studies, the decrement in hemoglobin may have resulted from an increase in plasma volume or a decrease in red cell mass. Normal red cell survivals were subsequently observed

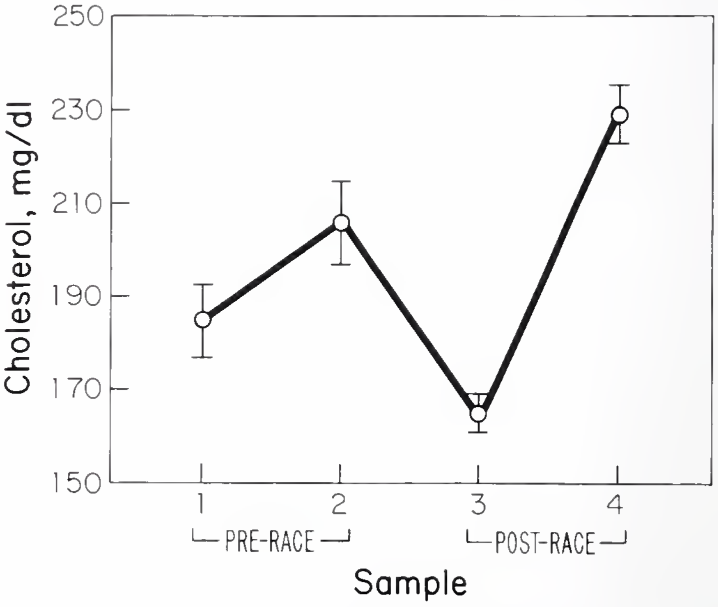


Figure 3. Mean cholesterol values for subjects before and after the race. Samples represent: 1-sample on arrival in Anchorage; 2-sample one day prior to race; 3-sample upon finish in Nome; 4-sample three weeks after the race. Vertical bars represent ± S.E.M.

in two 1978 subjects who again demonstrated a reduction in hemoglobin concentration. The reduced hemoglobin concentration in the presence of a normal red cell survival suggests that hemodilution occurred secondary to an increase in plasma volume. The magnitude of such a change in plasma volume can be estimated utilizing the formula of van Beaumont et al. (29):

% change in plasma volume =

$$100/100 - \text{hematocrit}_{\text{prerace}} \quad \text{x } 100 \quad (\text{hematocrit}_{\text{prerace}} - \text{hematocrit}_{\text{postrace}})/\text{hematocrit}_{\text{postrace}}$$

Application of this formula requires a constant red cell mass and mean corpuscular hemoglobin concentration. Based on the observed lack of change in MCHC and the assumed lack of change in RBC mass, we estimate the mean plasma volume increased by 21.8% during the race.

Significant changes in total protein and albumin also occurred. Protein changes are known to accompany hemodilution (29), further supporting our postulate that the plasma volume increased. The mechanism by which this increase in plasma volume occurs and its physiologic significance remain to be determined. The extent of sports anemia has been related to dietary protein intake in less extreme conditions (31); in this work, Shirake et al. have suggested the anemia represents an adaptive response to meet increased requirement of protein in skeletal muscles during exercise.

Studies of thyroid function revealed a 30% decrease in the mean T_4 level during the race. This decrement was still apparent three weeks after completion of the race. The concomitant drop in the free T_4 index and the persistent depression in T_4 level, despite return of serum protein levels to normal three weeks later, suggests a real decrement in the hormone level and not merely an alteration in binding proteins.

In studies of less prolonged exertion in humans, increased degradation of T_4 has been demonstrated (32). Cold exposure has also been shown to increase the rate of T_4 metabolism in peripheral tissues (33) and to decrease thyroid hormone levels (34). In the Iditarod participants, the combination of severe cold exposure and protracted exertion may have augmented the rate of T_4 degradation resulting in depressed levels of hormone.

Many previous studies have shown increases in corticosteroid concentration during intense, short-term physical exertion (35), however, we found that cortisol levels fell during the race. Although the decrement was small in absolute magnitude, the mean post-race cortisol level was below the lower limit of normal. The excellent physical condition of the participants

TABLE 1

Summary of Endocrine, Muscle Enzyme and Serum Chemistry Changes During the Iditarod Race

Category	Parameter	Normal Range	Pre-Race Mean (+ SEM) Sample 2	Post-Race Mean (+ SEM) Sample 3	Change Sample 2-3
Endocrine	T_4 (RIA) (mcg/dl)	4.5-12.0	8.2 (+ 0.5)	5.7 (+ 0.5)	− 2.5**
	Free T_4 Index	3.9-13.7	8.7 (+ 0.4)	6.2 (+ 0.6)	− 2.5**
	Cortisol (ug/dl)	4.0-11.0	5.4 (+ 0.5)	3.5 (+ 0.9)	− 1.9+
	Prolactin (ng/ml)	3.0-18.0	6.4 (+ 0.6)	6.4 (+ 1.2)	0.0+
Enzymes	CPK (IU/L)	36-188	149 (+ 67)	262 (+ 42)	+ 113*
	SCOT (IU/L)	0-40	24.8 (+ 1.5)	33.8 (+ 2.7)	+ 9.0**
	LDH (IU/L)	60-200	168 (+ 19)	182 (+ 20)	+ 14**
	Alk Ptase (IU/L)	30-115	76.0 (+ 4.4)	61.2 (+ 5.4)	− 14.8**
Serum Chemistry	Cholesterol (mg/dl)		206 (+ 9)	165 (+ 4)	− 41**
	Uric Acid (mg/dl)	3.9-9.0	6.0 (+ 1.0)	5.3 (+ 0.4)	− 0.7+
	Total Protein (g/dl)	6.0-8.5	7.6 (+ 0.2)	6.9 (+ 0.2)	− 0.7*
	Albumin (g/dl)	3.0-5.5	4.6 (+0.1)	4.1 (+ 0.1)	− 0.5**

* Significant at $p \leq 0.05$

** Significant at $p \leq 0.01$

+ Not significant

Health and Safety Tip
From the American Medical Association

535 North Dearborn Street/Chicago, Illinois 60610

Children Can Learn Good Dental Habits

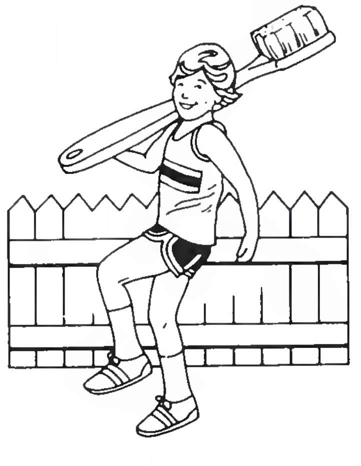
Urge Care Of Teeth

Good teeth start in childhood, and there are things parents can do to help insure that their offspring have a minimum of dental health problems both in childhood and later years.

To point up the fundamentals of good dental health for children, the American Dental Association has declared the first full week in February as National Children's Dental Health Week.

The ADA lists four simple rules which, if followed faithfully, can help reduce decay:

- Cut down on sweets, especially between meals.
- Brush teeth immediately after eating (snacks as well as regular meals). When this is not possible, rinse mouth thoroughly with water.
- Have regular dental checkups. This enables the dentist to discover decay and other problems at an early stage.
- Fluoridation of community water supplies greatly reduces decay. Where water supplies are not fluoridated, dentists sometimes suggest applying fluoride directly to children's teeth.



Sugar is named as a major cause of tooth decay. Bacteria that are present in the mouth act on sugar to produce acids. These acids attack the teeth. Of course, sugar is an important part of the diet. But it can be controlled. Nibbling on sweets all day is hard on your teeth. Eat your candy all at once, then brush your teeth.

The American Medical Association points out that many children, perhaps most of them, lose a tooth or two through an accident, often with a baseball bat or a playground fall. If this happens, wrap the tooth in a wet towel and take both child and tooth to the dentist. Sometimes the tooth can be replanted.

Dental authorities agree that the child should make his first visit to the dentist at about age 2½ to 3 years. By this time the baby teeth are in, and the dentist can check for signs of decay or malformation.

Sound teeth in childhood can prevent many dental problems in later life. Regular dental care is an important part of the overall health care of the family.

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Frank Chappell
Science News Editor
AMA

may have been a factor in the decrease. It has previously been shown that during exercise cortisol levels may not change or may be decreased in very well trained individuals as compared with untrained individuals (35, 36). In addition, the longer duration of the exertion may explain the disparity with previous studies. Repeated or protracted exposure to stressful situation has been shown to result in gradual inhibition of adrenocortical response (37, 38). Such an adaptive response to protracted stress has been postulated to occur in combat personnel (16).

The lack of increase in prolactin levels is surprising as a wide variety of situations (e.g., exercise, stress, hypoglycemia and sleep) have been associated with elevations of this pituitary hormone (39). As the surge in prolactin level appears to be related to sleep (39), we speculate that the sleep deprivation experienced by the subjects may have altered prolactin release.

The elevations in creatine phosphokinase (CPK) and lactic dehydrogenase (LHD) observed in the immediate post-race samples are consistent with results obtained in other studies of physical exertion (40, 41). The rise in CPK undoubtedly represents enzyme release from skeletal muscle during the severe exertion. The LDH rise may also reflect enzyme release from muscle. The magnitude of these increments is surprisingly small considering the severity and duration of the physical exercise involved. However, the superb physical condition of the mushers may have blunted the rise in enzyme levels. It has been demonstrated that physical conditioning decreased the elevations of muscle enzymes observed after severe exertion (40, 42, 43).

Though uric acid did not vary significantly, striking changes in cholesterol levels were observed during and after the race. The serum cholesterol levels may have been affected by changes in diet (44, 45) and the composition of the musher's diet could not be controlled. Dietary histories obtained from each subject, however, revealed a heavy reliance upon protein and animal fat. The reduction in cholesterol, therefore, probably did not result from the subject's diets, which were likely high in both cholesterol and saturated fats. Exercise has previously been shown to result in decrements in cholesterol levels (44). The magnitude of reduction has been related to initial cholesterol levels, prior physical conditioning, duration of exercise and the intensity of exertion (44). It seems likely that the decrease in cholesterol observed during the race resulted from the protracted physical exertion. The mechanism by which exercise modifies cholesterol levels is, at present, not understood (44). The observation that there is a marked rebound in cholesterol levels three weeks after the race may also have clinical relevance and should stimulate further observations in individuals who undergo intense physical exertion for prolonged periods and then resume normal levels of physical activity.

Thus, the principal blood changes observed in men immediately after the 1049 mile Iditarod race included: 1. decrease in hemoglobin concentration; 2. decrease in serum T_4 and plasma cortisol; 3. decrease in cholesterol and serum protein and 4. increases in muscle enzymes. No significant changes were observed in measures of prolactin, 17-ketosteroids, uric acid, BUN, creatinine, electrolytes and urinary specific gravity and PH.

It is conceivable that hemodilution might have accounted for a portion of the decrements in T_4, cortisol, cholesterol and proteins. However, observations of BUN, creatine and urinary specific gravity among others did not show analogous shifts. Furthermore, three of the four enzymes studied rose rather than declined after the race. Three weeks after the race, despite restoration of hemoglobin values to baseline, decreases in thyroid function persisted. All these findings suggest something other than simple hemodilution to have been operative.

Considered individually the observed changes may reflect exhaustion or marked reduction of specific bodily stores. Viewed collectively, the anemia, reduced thyroid function and decrements in cortisol, cholesterol and protein levels suggest a more generalized lowering or attenuation of physiological responsivity in the face of prolonged exposure to a unique group of stressors. This constellation or pattern of physiological change, presumptively adaptive and centrally mediated, could be further clarified by sampling during the course of the race and attention to concomitant psychological responses to the Iditarod experience. These steps are part of our current studies.

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Health and Safety Tip
From the American Medical Association

535 North Dearborn Street/Chicago, Illinois 60610

Sun Tanning Harmful To Skin, Says AMA

Sun Tanning Harms Skin

What does your doctor think of sun tanning?

He's against it.

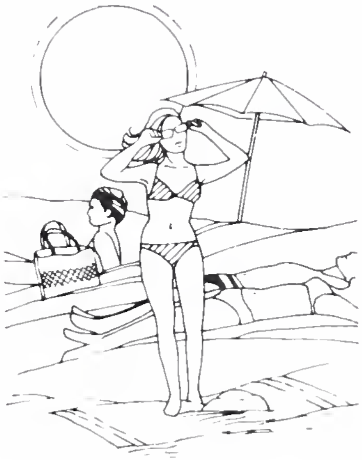
If you should ask your doctor whether there is any health value to sun tanning, he would have to answer "No." If you asked him whether sun tanning might hurt you, he would have to reply "Yes."

Sunning, overdone, can cause severe burn. Sunning, done modestly, can produce a golden tan that gives an illusion of health and well being. But that golden tan often leads to premature aging and wrinkling of the skin, to premature "age spots" on the hands and neck, and to skin cancer.

So, once again, the American Medical Association advises Americans everywhere against suntanning.

But, your doctor also is well aware that millions of Americans will ignore this advice this summer. They will flock to the swimming pools and beaches through the warm months to bask in the sun. They will stretch out on the grass in the back yard, or on the roof terrace, or in the nearest park.

If you insist on getting a tan this summer despite medical advice to the contrary, here's how to do it without burning.



On the first day of sunning, allow 15 minutes on each side. The second day 20 minutes. The third day 25 to 30 minutes. By the third day the skin should begin to brown. Thereafter proceed at the best pace for your own skin to tan without burning. At the first sign of redness, get out of the sun.

It isn't easy to confine sun time to only half an hour on the first day at the vacation resort. But you can't stretch it very much. If you try to double the exposure time to hurry the tan, you'll burn. And then return from vacation with a peeling skin instead of a tan.

Time of exposure also should be adjusted to time of day. The sun's rays are hottest between 10 a.m. and 2 p.m. After 5 p.m. you aren't likely to burn much.

There are creams and lotions that screen some of the rays and reduce danger of burning. But if the cream should screen all rays, there would be no tanning. You can still burn through creams if you stay out long enough. Also, water in the pool or perspiration washes away much of the cream in a short time.

Tanning removes most of the natural oils from the surface of the skin and many sunbathers find it helpful to use a cream or oil to relieve dryness.

Enjoy the outdoor life of the summer months. Don't overdo the suntanning.

June, 1980
Frank Chappell
Science News Editor
AMA

THE SOLITARY PULMONARY NODULE

Norman J. Wilder, M.D.

During the last decade, several articles have appeared concerning the evaluation and management of the solitary pulmonary nodule. The medical literature is quite controversial in this regard, even to the point of whether to call these lesions solitary pulmonary nodules or coin lesions. Whenever an article suggests either "watchful waiting" or "early thoracotomy", the editorial accompanying the article points out the reason for the opposite approach. Keeping in mind that controversy exists, I'll try to summarize the literature and present a reasonable approach to the evaluation and management of the patient with a solitary pulmonary nodule.

What is a solitary pulmonary nodule? The criteria are quite rigid and most of the articles on the subject are in general agreement. For our purposes, a solitary pulmonary nodule is a chest roentgenogram finding of a lesion that is usually round or ovoid, not less than 1.0 cm, nor more than 6.0 cm in diameter with normal surrounding lung tissue, and no other parenchymal abnormalities. Lesions less than 1.0 cm in diameter may be difficult to define roentgenographically or to find at thoracotomy. A lesion greater than 6.0 cm in diameter rarely meets the other criteria. Some authors exclude obviously calcified lesions, but other definitions will include them. The lesion is not flat like a coin, which is why most authors prefer to avoid the term "coin lesion". Advocates of the term feel it is "brief and memorable and has endured for a quarter of a century".

Why is the management of the solitary pulmonary nodule controversial? Simply stated, the answer is cancer. In general, the earlier cancer is discovered and removed, the greater the chance for cure. If thoracotomy were a painless procedure that had no morbidity or mortality and left only a negligible scar, there would probably be no controversy - all lesions would be removed. Most solitary pulmonary nodules are benign and do not require surgical removal. The problem is deciding which patients need the lesion removed and which can be followed without surgery. There is general agreement that thoracotomy is not required if the lesion either (1) contains unequivocally benign calcification, or (2) is documented to have not grown for the previous two or more years.

What is **benign calcification?** It includes lesions calcified in a lamellated, heavily stippled, or chunky appearance. In general, any lesion that is unequivocally calcified on chest roentgenogram or tomogram is overwhelmingly benign. Possible exceptions include a small eccentric calcium deposit at the margin of the lesion or fine stippling of the lesion. A "scar carcinoma" may have eccentric calcium and some tumors may contain fine flecks of calcium. Some authors will exclude these latter forms of calcification. All are in agreement that the lesion must be easily identified as containing calcium to be considered benign. An equivocal lesion is to be considered "non-calcified".

What is the risk of lung cancer in the solitary pulmonary nodule? In short, it depends upon the population group studied. In several public health surveys, the incidence of cancer in solitary pulmonary nodules found in a general population was 3-6%. In some thoracic surgery referral centers the incidence can approach 50%. Studies in histoplasmosis-endemic areas show a low incidence because of a high incidence of granulomas. Age is another significant factor. Nearly all studies report the risk of cancer to be less than 1% in patients less than 35 years of age.

What is the cure rate if the solitary pulmonary nodule is cancerous? Depending once again upon patient populations, the 5 year survival

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range is between 26% to 93%. If one looks at those patients who are surgically cured of malignancy and adjustments are made for normal expected population mortality, the figure is approximately 50% cure by surgery. It is hard to compare different series. Some exclude normal expected population death rates, while others include it. Some series don't clearly delineate "resectable" and "non-resectable" patients. Some centers are obviously referred cases that are farther advanced, whereas other centers screen and find their own cases and resect the nodules earlier. In general, the five-year survival of all patients who have had thoracotomy for a malignant pulmonary nodule is approximately 40%. Does delay in performing thoracotomy affect the cure rate? Obviously such a study doesn't exist. Once the diagnosis of cancer is made, it is resected if possible. Delay must decrease survival, but does a few months delay (to get old films, check growth, etc.) significantly alter survival? The answer isn't known.

Why not remove all solitary pulmonary nodules not definitely known to be benign? As a matter of fact, some centers do just that. They point to low morbidity and essentially no mortality in their hands with thoracotomy. In many instances, a "limited thoracotomy" is performed with even less residual pain. The decreased mental anguish of knowing that the lesion was not cancer is also given as reason for early thoracotomy. If the patient is 35 or older, most physicians agree with thoracotomy, but if less than 35, the risk of cancer is so low that the morbidity/mortality and expense are not justified. In 1,000 young people, the cure rate for tumors would have to be lowered from 80% to 40% for routine thoracotomy to be proven superior to watchful waiting. This calculation is based on figures from a series with 80% five-year survival with early thoracotomy. The figure is for mortality alone and does not consider the morbidity or expense of the needless surgery in most of the patients.

What are other causes of solitary pulmonary nodules? Granulomas and hamartomas make up the majority of all non-malignant nodules with hamartomas representing 10%; granulomas 80-90%. Histoplasmona, tuberculoma and coccidioidoma are quite common. Cryptococcus, blastomycosis, actinomycosis and unidentified granulomas are less common causes. Lung abscess, infected, fluid-filled bulla or a slowly resolving pneumonia are other less common infectious causes. Lipoid pneumonia, bronchogenic cyst, A-V fistula, pulmonary infarct, cronchial adenoma, rheumatoid nodule or an enlarged pulmonary artery may occur as a solitary pulmonary nodule but are much less common than the other causes.

What routine tests should be performed in the evaluation? Of critical importance is obtaining previous chest roentogenograms. Show that the lesion has been present for at least two years and is unchanged in size and cancer is no longer a consideration. Do not rely on the film report. The lesion may have been missed. Often times "company films" are not formally interpreted. Small clinics may have the films officially interpreted by a person not specially trained in reading chest roentgenograms. Unless the lesion is obviously calcified, laminograms of the nodule may allow a definite decision to be made about calcification. Also, the laminograms may help the surgeon locate a small nodule at the time of surgery. The role of CT scanning is unknown. It might pick up calcium otherwise missed but calcium found this way cannot be considered to represent a benign nodule.

Are other tests helpful? The answer is maybe. Fiberoptic bronchoscopy and thin needle aspiration are of limited benefit. If cancer is found by these procedures, surgery will be performed. If cancer is not found, can you be sure it wasn't a sampling error? Only if the lesion is definitely entered and positive culture is obtained can thoracotomy be avoided in the absence of some contraindication to surgery. Most solitary nodules are somewhat peripheral and hard to reach with brushes and forceps. Fungal serologies, skin tests, sputum cultures and sputum cytologies may be of help. Once again, can you be sure that the nodule is not malignant just because of the fungal serology for histoplasmosis is positive in a resident of fungus endemic are? The answer is obviously "No". A patient's smoking history may influence the decision, but even life-long non-smokers can develop lung cancer. Do not look for a primary tumor elsewhere unless definite symptoms suggest tumor involvement. Various nuclear medicine scans, bone surveys, CT scans, barium studies and tissue biopsies are rarely helpful in the absence of symptoms.

What is a reasonable approach to the patient with the solitary pulmonary nodule? Prove the nodule to be benign, if possible, by obtaining old films and showing no growth in two years or demonstrate unequivocal calcium in the lesion. A phone call to a facility having an old film will always expedite its mailing and confirm its presence. However, it may reveal that it is lost or non-existent. A few weeks delay waiting for an old film is justified. In the interim, several sputums for cytology can be obtained and an intermediate strength PPD skin test placed. If the patient is less than 35 and has a positive PPD, a year of INH chemoprophylaxis should be given unless it has already been done. In the under 35 patient, regardless of skin test status, obtain a repeat chest roentgenogram in three months, then every six months until the lesion is proven stable for at least two years. If the nodule enlarges at any time, thoracotomy should be done. Benign granulomas are known to occasionally enlarge, but any enlarging nodule should be removed. If the patient is 35 or older and the lesion has not been proven to be benign, then the nodule should be removed unless the patient refuses surgery or is considered to be inoperable.

These guidlines are generally accepted as valid but obvious exceptions will occur. A two pack-per-day cigarette smoker since age six (I've personally seen two such patients) might warrant thoracotomy even though younger than 35. A life-long non-smoker who has lived in Bakersfield (coccidioidomucosis-endemis area) and has documented infiltrates on chest roentgenogram with an episode of "Valley Fever" may not warrant thoracotomy even though older than 35. A close followup with chest roentgenograms to document no growth over the next two years might be sufficient. In general, if you have any doubt about the nodule being malignant or benign, it should probably be removed.

In summary then, the management of the patient with a solitary pulmonary nodule is controversial. Several guidelines have been given to help in your evaluation. As with all guidelines, however, exceptions exist and each case must be approached from an individual standpoint. Hopefully, the preceeding guidelines and discussion will be helpful in your approach.

The author thanks Dr. Richard Byrd who was chief of his pulmonary training program and who has co-authored a major review article on solitary pulmonary nodules. Much of the material for this article was obtained from that review. A complete bibliography will be supplied upon request.

WELCOME
TO PEACEFUL VALLEY
POISON OAK!
DON'T PET BEARS
BEWARE OF DOG!
CAUTION: TICKS!
POISON IVY!
DANGER! SNAKES!
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Please consult complete prescribing information, a summary of which follows:

* **Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
  "Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.
  Final classification of the less-than-effective indications requires further investigation

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction, hypersensitivity to chlordiazepoxide HCl and/or clidinium Bromide

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl/Roche) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets

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MARTHA L. WILSON, M.D.

A long-time Alaskan, "Dr. Martha" as she was known to her colleagues and friends, was a native of South Carolina. She received her B.S. Degree from Winthrop College in Rock Hill, South Carolina, attended medical school at the University of North Carolina and received her M.D. from the Medical College of South Carolina in Charleston. She interned at Watts Hospital in Durham, South Carolina, and completed her residency in internal medicine at the McGuire V.A. Hospital in Richmond, Virginia. Prior to her PHS Service, she served as Staff Physician at Fort Jackson, South Carolina; Osaka Army Hospital, Osaka, Japan; and Oteen VA Hospital, Ashville, North Carolina.

Dr. Wilson's career with the Public Health Service began in 1956 at the Tacoma Indian TB Hospital in Tacoma, Washington. She came to Alaska in 1959, serving as Chief of Medicine at the Alaska Native Hospital in Mt. Edgecumbe. In 1961 she transferred to the Alaska Native Medical Center as Assistant Chief of the tuberculosis unit. As her administrative skill became recognized, rapid promotion followed and she served as Service Unit Director from 1963 to 1971. In that year, she became the Chief of the Office of Program Development for the Alaska Area Native Health Service and was appointed Project Delivery Director for the ATS-6 satellite experiment in health care delivery in 1973.

Dr. Martha has often been recognized for her outstanding professional qualities. In 1965 she was awarded the PHS Commendation Medal after a relatively short time as Service Unit Director for a series of far-sighted actions which include: Developing Medical Center care concept; providing specialty services to the field; taking care of a two-year surgical backlog; establishing orthopedic clinics; training physicians for the field in ENT, TB, and pediatrics; arranging for the provision of laboratory and x-ray consultation to the field hospitals; and developing and sponsoring a rehabilitation project.

In recognition of her activities in the field of rehabilitation, Dr. Martha was selected in 1965 by the Alaska Crippled Children's Treatment Center to be the first representative of the U.S. Public Health Service to their medical advisory board. In 1969 she became a member of the Borough Advisory Committee on Comprehensive Health Planning, and later the Greater Anchorage Area Health Planning Council. She was also a charter member of the Anchorage Council on Alcoholism and a Charter Associate member of the Cook Inlet Native Association.

In 1973 she received a Commendation from the Easter Seal Society for her efforts in helping to establish the Alaska Registry for Persons with Impairments. The Pacific Region of the National Rehabilitation Association presented a special tribute to Dr. Martha for her didication to the lives of people.

Amazingly adaptable, Dr. Wilson was a vital exponent of the values of space technology and she did her best to assure that satellite communications would become a part of the solution to the severe medical and social problems which exist in rural Alaska, as well as in rural areas throughout the world. From 1974 to 1976, her pioneering efforts in practical telemedicine won her accolades from colleagues in the United States and Canada. In 1975, she was nominated for the Federal Woman's Award by the National Aeronautics and Space Administration. The Alaska Area Native Health Service nominated her for a Meritorious Service Medal in 1975 for making the Alaska Satellite Telemedicine Project such a success. This project demonstrated the feasibility of patient care being rendered by video transmission and showed that this could be enhanced by the simultaneous transmission of heart and breath sounds stethophonically along with the current electrocardiogram.

She was honored by the Alaska Public Health Association in 1978, receiving the Health Achievement Award, which is given to health professionals who have made an outstanding contribution to health of Alaskans.

While everyone who knew her recognized her abilities and her competence as a physician, administrator and innovator, she was an attractive, alert and vivasious person. She and Dr. Joe Wilson, Chief of Surgery at the Alaska Native Medical Center, formed a family team as well as a professional team. Their son Joseph is a Biology teacher and Assistant Wrestling Coach at Bartlett High School; daughter Mary Stuart Wilson works for Arctic Environmental Information and Data Center; son Riley is in a Master's Program in Wildlife Biology at Washington State University; daughter Frances, a Senior at Whitman College, is interested in Fish and Game. The warm, sharing atmosphere in the Wilson home is no small measure attributable to the warmth and spirit of Dr. Martha.

For the past several years, Dr. Wilson was instrumental in developing, promoting and shepherding the Patient Care Information System. The Patient Care Information System has as its primary purpose the maintenance and improvement of the health of the Native people, with direct support of patient care through a computer generated summary which containes a multi-disciplinary, multi-facility problem list and a health surveillance monitoring section.

Dr. Martha Wilson will be remembered for her skilled, empathetic, comprehensive, innovative approach to the provision, organization, evaluation and restructuring of health care programs for people.

John B. Muth, M.D.

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Red Cross needs individual volunteers, and donors of blood and money, by the millions.

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For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Please see back cover.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

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Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

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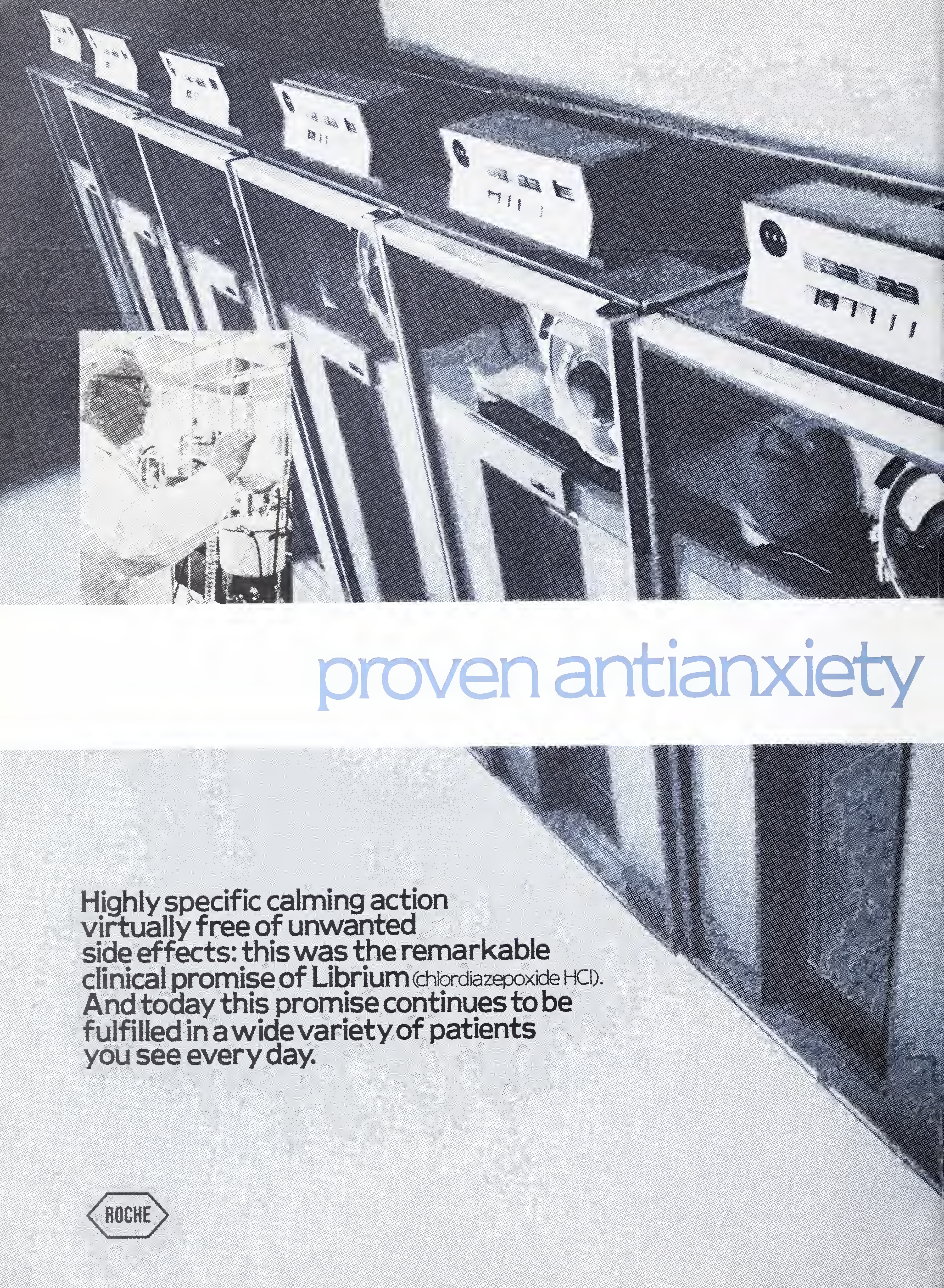

Highly specific calming action virtually free of unwanted side effects: this was the remarkable clinical promise of Librium (chlordiazepoxide HCl). And today this promise continues to be fulfilled in a wide variety of patients you see every day.

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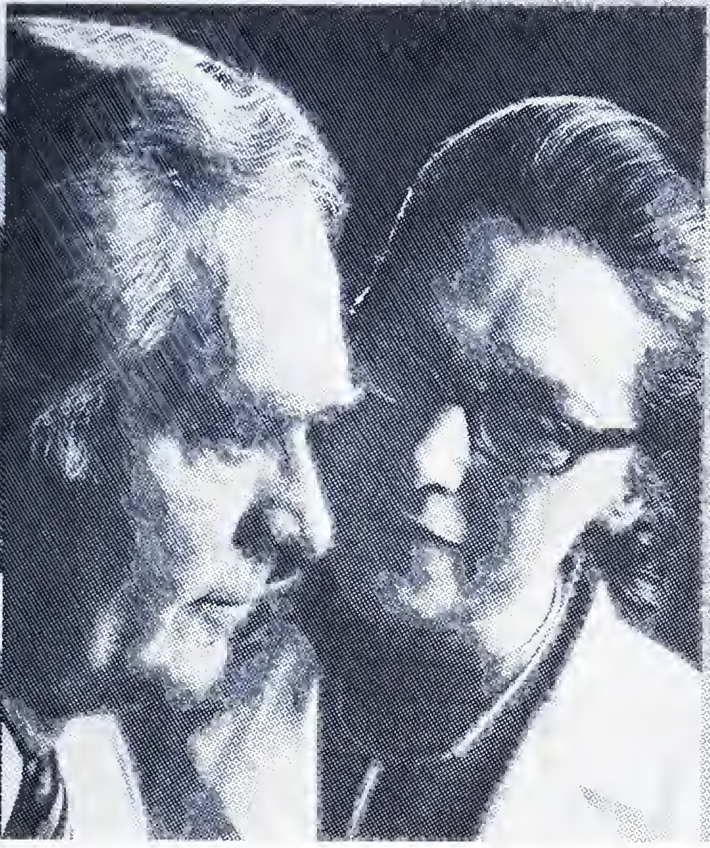

The published record on Librium is enormous. So large, in fact, it had to be put into a computer data bank and retrieval system. It's a record that shows Librium is highly effective in relieving anxiety; that Librium is seldom associated with serious side effects; that Librium rarely interferes with mental acuity at proper doses; that Librium is used concomitantly with primary medications. However, as with all CNS agents, patients should be warned against hazardous activities requiring complete alertness, and about possible combined effects with alcohol.

performance

Librium® Ⓒ IV
chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

synonymous with relief of anxiety

- ☐ An unsurpassed safety record
- ☐ Minimal effect on mental acuity, in proper dosage
- ☐ Predictable patient response
- ☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

Please see next page for summary of product information.

Librium® 5mg, 10mg, 25mg capsules
chlordiazepoxide HCl/Roche

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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LASER BEAMS

When Flash Gordon fought off Ming the Merciless with energy rays, it was science fiction. Now the use of energy rays is no longer fiction, it's an important part of science.

A recent issue of the **Journal of the American Medical Association** *reports on a successful new procedure using laser beams that was never before done in the United States.*

A carbon dioxide laser beam was used to destroy an inoperable brain tumor in a 53-year-old New York woman. The surgeons followed a "blueprint" of the tumor's location and shape made by a procedure called CAT Scanning. The laser was aimed at the tumor, which was then vaporized by the heat of the beam. Doctors knew the entire tumor was gone when X-Rays revealed a cavity in the brain that exactly matched the size and location of the original tumor.

Laser beams are also used in eye surgery and non medical applications such as in photography. Scientists are currently exploring further uses of this new technology.

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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Volume 22 July/August 1980 Number 4

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About the Cover: *Mt. Susitna* by William Bowers, M.D.

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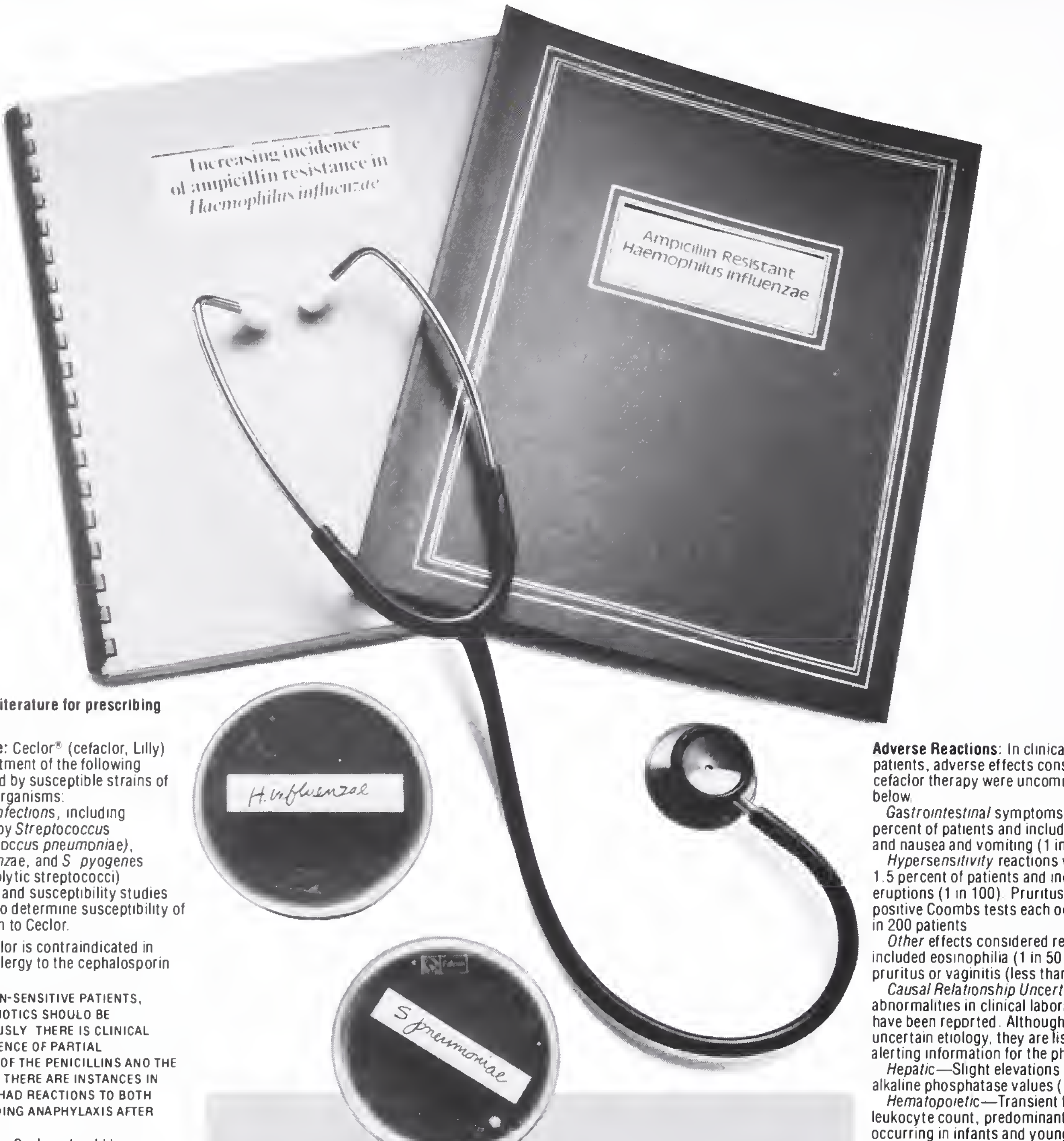
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae)*, *Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE)

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g , pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Adverse Reactions: In clinical studies in 1493 patients, adverse effects considered related to cefaclor therapy were uncommon and are listed below

Gastrointestinal symptoms occurred in about 2.5 percent of patients and included diarrhea (1 in 70) and nausea and vomiting (1 in 90)

Hypersensitivity reactions were reported in about 1.5 percent of patients and included morbilliform eruptions (1 in 100) Pruritus, urticaria, and positive Coombs tests each occurred in less than 1 in 200 patients

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory tests results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [070379R]

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* Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.[8]

Note: Ceclor® (cefaclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information

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Additional information available to the profession on request from Eli Lilly and Company. Indianapolis, Indiana 46285

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WHAT THE OTOLOGIST SHOULD DO FOR YOU

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A ONE ACT PLAY

Milo H. Fritz, M.D., F.A.C.S.

The setting is the office of the greatest M.D. in Anchor Point, Alaska. He is the only physician in town. As the only otologist on the Kenai Peninsula he is also Kenai Peninsula's greatest otologist. Neither of these distinctions have turned his head. Orchestra plays 1812 Overture.

The office overlooks the blue waters of Cook Inlet and Mt. Iliamna, Mt. Augustine — both active volcanoes — and Mt. Redoubt (a volcano just now on sabbatical leave) and the lesser of the Alaska Range.

The doctor is not as young as he was. He is a member of an endangered species having been certified by both the American Board of Otology and the American Board of Ophthamology early in 1943. They don't make'em like that anymore. There is just too much to learn in one lifetime. His attitude toward life and his fellow human beings has been leavened by 45 years of practice, 43 years of surgery, 6 years as a combination EENT surgeon and operator of a Case 350 Cat, 4 years in the Alaska Legislature and forty-two years of marriage to the same wife.

In this play, a true account, the names are changed to protect the guilty.

CAST OF CHARACTERS

The Doctor	Age 68
Donald Jones	Age 48, engineer on the Alaska railroad
Estelle Jones	Age 42, looking a young 36, housewife
Todd Jones	Age 8, schoolboy
Nurse audiologist, R.N., receptionist and background voices for other patients	

DOCTOR: (in a stentorian voice that shattered glass and caused chips of plaster to fall from the ceiling until acoustic tile was applied).
Follow me please, Mr. Jones. I got your request from Wembly on Thursday.

DON JONES: *Today isn't Wednesday and I'm not thirsty. The nurse just tested my hearing in that beer cooler or is that where you keep your money?*

Milo H. Fritz, M.D., F.A.C.S., Diplomate of the AAO&O.

DOCTOR: (Turning up the volume still more as nurse and receptionist put on their ear muffs and a waiting 2 year old begins to cry) *Please follow me.*

(The doctor leads the patient to the examining room, picking up his chart with attached audiogram on the way.)

Sit down here Don. (Doctor does basic ENT exam using tongue blade, head mirror, nasal speculum, otoscope, nasopharyngoscope, tuning fork, noise maker and all the rest. He then assists the patient from the examining chair to one of three comfortable ones arranged beside his desk.)
Mind if I ask your wife to come in?

DON JONES: *What do you want to bring your wife in here for? Scared of me?*

DOCTOR: (With a voice turned up to a dull roar) *Not* my *wife* your *wife and your son.*

DON JONES: *Okay, Doc. But he isn't my son, he's my grandson!*

(Doctor goes to the waiting room and invites Estelle and Todd Jones to follow him into the examining room. The doctor has found that if he permits patients to preceed him that they are uneasy, going into a strange dimly lit room that may be full of eye bears or IRS agents. So he always breaks trail from reception area to examining room and from the latter to the discharge desk.)

(Doctor seats Don nearest him, Estelle next to her husband and young Todd next to her.)

DOCTOR: *I'm married too, Estelle. So I know you'd never believe your husband's interpretation of what I say. And what I say is important for you to understand. And Todd, who is that little girl out there?*

TODD: (Softly) *My sister, my sister Dottie.*

DON JONES: *Why don't you answer the doctor Todd?*

TODD: (Turning up the volume) *I did Gramps.*

ESTELLE JONES: *See, that's what I mean. Ed just doesn't* hear.

DON JONES: *I hear Doc alright you just mumble and - - -*

DOCTOR: *No Don, I'm shouting at you. That's why you can hear me. Now, while we're here together and so you won't miss a thing, I want you to use this speaking tube. Here, put the little angled plastic end in your ear and I'll talk through the funnel end. Okay?*

DON JONES: *You're the doctor.* (Puts ear piece in his right ear resting his elbow on the desk. The doctor holds the funnel just below his lower lip so that he is always talking into it no matter how he moves his head.)

DOCTOR: *Hear me better now?*

DON JONES: *You bet. Say this is great. Go ahead Doc.*

DOCTOR: (Holding audiogram for all three to see). *See this heavy black line near the top? Well, that's normal hearing in that beer cooler or test room. The solid red line is what you heard, Don, through the phone in the right ear and the solid blue what you heard on the left side. The broken red line shows what you heard through the bug behind the right ear and the broken blue line is what you hear through the bug behind your left ear. Okay so far? The word test and other tests don't count in Don's case.*

Don, Estelle and Todd murmur assent.

DON JONES: *Say, this gadget is okay. How much are they? A thousand bucks?*

DOCTOR: *About 25 bucks. But they are too awkward for work, social situations, meetings, church and they embarrass the user except in situations like this.*

Now notice how the solid red and blue lines parallel the heavy normal line for halfway across the chart at the number 20 in the 500, 1000 and 2000 vibration column. Notice then how the line slants down sharply to the bottom at the 4000, 6000 and 8000 vibration columns. Got it?

Don, Estelle and Todd murmur assent.

DOCTOR: *Now, what this shows is that you, Don, can hear low-pitched sounds fine but s's, h's, high pitched sounds go by and you don't hear them. And you have a terrible time with women and children's voices. Right?*

DON JONES: *You're right.*

ESTELLE: *Todd and Dottie always tap Gramps on the shoulder before they talk.*

DOCTOR: *The youngsters often do this. They figure grandpa can't hear and do this to get his attention. Adults seldom are that smart.*

Now suppose you are talking with Estelle here and the kids turn on the TV, what happens?

DON JONES: *I can't understand a thing, I hear them but I can't understand them.*

DOCTOR: *Now, Estelle and you too Todd, remember that. In a noisy place, grandpa can hear you but he can't understand what you are saying. You know Don, many words have high-pitched and low-pitched parts. So if parts of certain words are missing, you're in trouble and what you hear is not language but gibberish.*

Ever listen to TV?

DON JONES: *I sure do, especially the sports. Say, I sure can understand you fine through this. I can even hear that fan in the ceiling and the telephone out there.*

ESTELLE: *That's what makes me so mad. I know I shouldn't be mad. When I am busy the phone rings and Don just ignores it!*

DOCTOR: *No, he doesn't* hear *it.*

And I'll bet when you're in the closet hanging up your coat among the parkas and snow machine suits you say, "How did things go in the shop honey?"

ESTELLE: *Yes and he doesn't even grunt an answer! He doesn't pay any attention to me.*

DOCTOR: *And you think he doesn't love you anymore! But the truth is he doesn't hear you. Those clothes muffle your voice and that plus his ignorance of your presence makes it worse.*

ESTELLE: *And the TV and radio - -*

DOCTOR: *I know, Don is sitting there looking at TV or listening to the radio and you come in from the garage. The walls are vibrating and the windows rattling. You sidle up to the TV and turn it down so it's comfortable for you and Don can't hear a thing. You say, "Don, I could hear that TV out in the garage with the car motor still running!"*

DON JONES: *That's exactly right.*

ESTELLE JONES: *How did you know Doctor?*

DOCTOR: *Experience. Add little things like this done repeatedly neither promote domestic tranquility nor provide for the common defense.*

ESTELLE JONES: *And I get mad and I know I shouldn't.*

DOCTOR: *Know why?*

ESTELLE JONES: *No.*

DOCTOR: *Well, when you're mad a somebody, Todd, what do you do?*

TODD: *I yell at them.*

DOCTOR: *Exactly. Everybody is sorry for the blind man but gets mad at the deaf man. Because yelling and anger go together. We begin by yelling to make the deaf man hear and end by being mad at him for no reason at all.*

ESTELLE JONES: *That's what I meant when I said I got mad and then was sorry.*

DOCTOR: *Todd, does grandpa hear better in the dark or when it's light?*

TODD: *When he can see.*

DOCTOR: *How come?*

TODD: *He reads my lips.*

ESTELLE JONES: *Todd is right. I never thought about that before.*

DON JONES: *So what's wrong Doc?*

DOCTOR: *Your nerve of hearing is damaged.* (Shows on a large model the external ear, the ear drum, the middle ear with it's ossicles and two windows, the cochlea and the 8th nerve).

ESTELLE JONES: *What happened to the nerve?*

DOCTOR: *Well, 30 years on the railroad and 20 years of listening to the hammering of the diesels on those locomotives, that's what did it in Don's case. Other things can do it too, like too much aspirin, certain antibiotics, drugs that cure malaria, things like that.*

DON JONES: *Can it be fixed by surgery? I've read about new operations where you fellas remove a stirrup bone that's frozen in place and put in a piece of steel or plastic or wire with fat on it.*

DOCTOR: *That's true. But there is no way yet known to do surgery for a damaged 8th nerve. Nerve of hearing.*

ESTELLE JONES: *You mean nothing can be done?*

TODD: *Hearing aids, Gram. Hearing aids like*

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Employers! You can get a tax credit of up to $3,000 each time you hire a worker eligible for the Targeted Jobs Tax Credit. And it's easy. Just hire the worker, fill in the blanks on the eligibility voucher, and drop it in the mail to your local Job Service office. No red tape, no complicated record-keeping. It makes good business sense and it helps people who need jobs.

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Contact your local Job Service or IRS office for details on the Targeted Jobs Tax Credit.

AMA Schedules New Series of Negotiations Training Programs

This year the AMA Department of Negotiations is offering several types of training programs, some cosponsored by state or county medical societies. The success of the department's programs in 1976 created a demand for their continuation. Co-sponsored programs have started in Ohio and Pennsylvania; others are planned in California, Illinois, Iowa, and Wyoming. In addition to these cosponsored sessions, the department has scheduled two-day institutes; three-day seminars, which have a more comprehensive approach; and three-day advanced seminars, for graduates of earlier two-, three-, and five-day sessions.

AMA Department of Negotiations
535 North Dearborn Street
Chicago, Illinois 60610

For additional information, write to J. Paige Clousson, Director, at the above address or telephone: (312) 751-6652.

Tenuate® ℂ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly *Drug Dependence* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks *Use in Children:* Tenuate is not recommended for use in children under 12 years of age

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema, *Endocrine:* impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System* Bone marrow depression, agranulocytosis, leukopenia *Miscellaneous* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A

Licensor of Merrell®

References: 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon [Dillon], R.H., and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S Garattini and R Samanin, Ed., New York, Raven Press, 1978, pp 391-404

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9-4672 (Y957A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® Ⓒ IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

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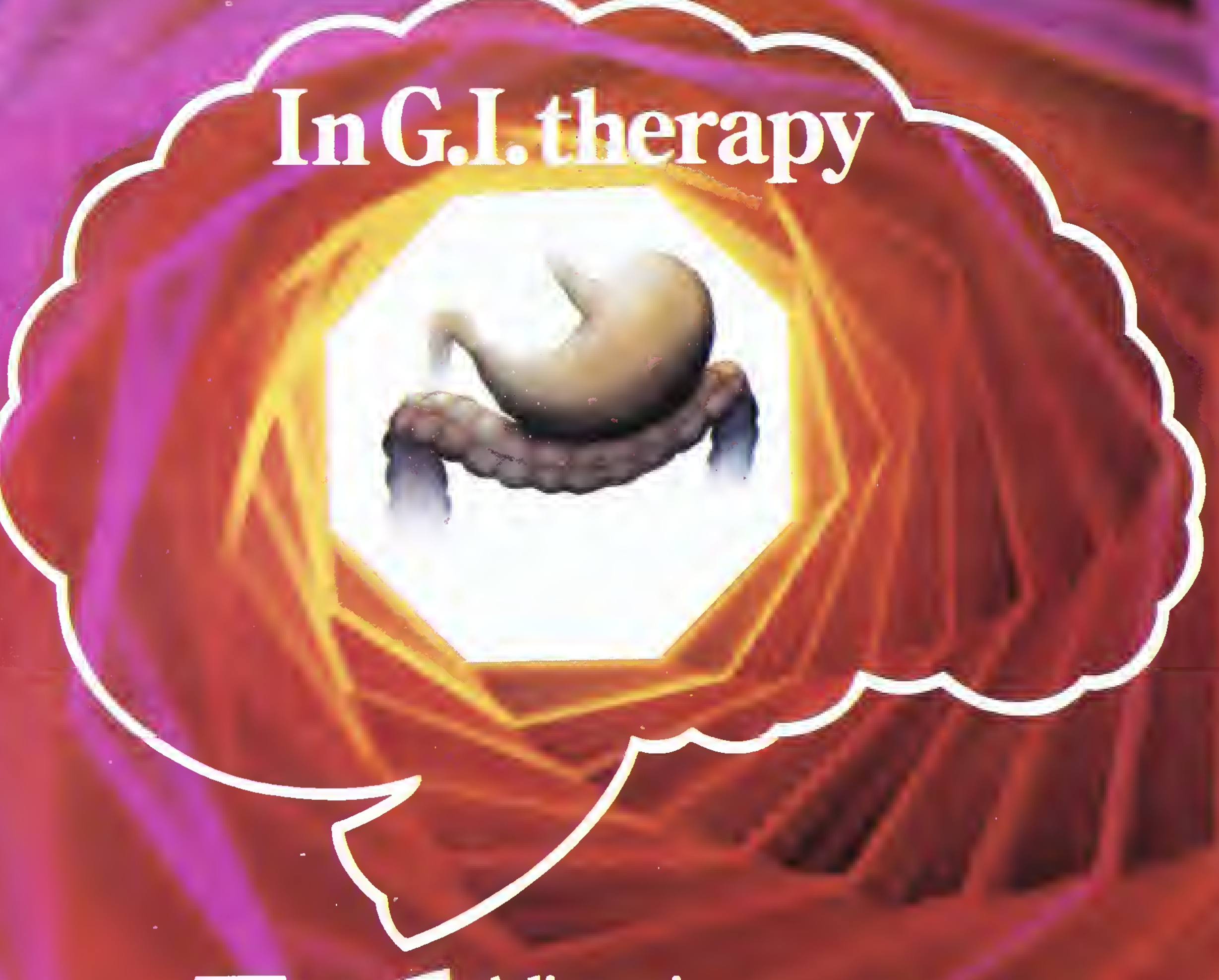
For prescribing information see opposite page.



Adjunctive Librax®

Each capsule contains
5 mg chlordiazepoxide HCl
and 2.5 mg clidinium Br

antianxiety/antisecretory/antispasmodic

for adjunctive therapy of duodenal ulcer*
and irritable bowel syndrome*

Librax®

Please consult complete prescribing information, a summary of which follows:

> * **Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
>
> "Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.
>
> Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl/Roche) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression: suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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my teacher Mr. Freese uses.

DOCTOR: *Todd is absolutely right. Not one aid but two.*

DON JONES: *Aren't they expensive? Tough to get used to?*

DOCTOR: *You play any musical instrument Don?*

DON JONES: *Yeh, the guitar a little.*

DOCTOR: *Had to learn how didn't you?*

DON JONES: *Yep, and I gotta practice everyday to keep up what I've learned.*

DOCTOR: *Well, hearing aids are just the same. You have to learn to use them and so you must use them everyday.*

ESTELLE JONES: *You say hearing* aids, *you mean two? Why?*

DOCTOR: *Well, with one aid you can't tell the source of sound and that could kill you. Say a driver blows his horn and you think the sound is coming from the left through your one hearing aid in your left ear. So you look left, but actually the driver is honking on your right. By the time you discover your mistake it could be too late and you get a free ride by ambulance to the hospital or maybe the mortuary. In your case Don, especially since the hearing loss is symmetrical, the same on both sides, two hearing aids would allow you not only to localize the source of the voice or any sound but improve the quality of what you hear.*

TODD: *You mean like two eyes are better than one?*

DOCTOR: *Exactly. With one eye, you reach for a glass of water and you often either knock it over or miss it because you reach too far or not quite far enough. You can't localize the position of the glass of water.*

DON JONES: *You're telling me I gotta have two hearing aids, right?*

DOCTOR: *Wrong. I'm trying to tell you one hearing aid would improve your hearing and two would make it much better. You don't* gotta *do anything. I'm just trying to tell you what I have found out is best so you won't be disappointed. But the final decision is up to you.*

DON JONES: *Can I shift this thing to my other ear?*

DOCTOR: *Sure, I should have told you. Now let me show you how much better things would sound with two of these speaking tubes. Okay?*

DON JONES: *Fine. I feel like a one man band.* (Don sticks the ear piece of another speaking tube in his left ear and the doctor holds both funnels against his lower lip).

ESTELLE JONES: *Be patient Don.*

DON JONES: *I don't need to be patient, Estelle, I'm enjoying this.*

DOCTOR: *Todd, take this card and step over there by the table, would you? Turn your back to us and read this in your normal voice.* (The doctor points the funnel ends of both speaking tubes towards Todd who stands about 8 feet away, back towards his grandparents and the doctor and reads) *The rain in Spain falls mainly in the plain.*

DON JONES: *By golly, I heard him. That's from My Fair Lady. One speaking tube was good but the two of them sure make things sound better. Clearer. More normal.*

DOCTOR: *Now take the ear pieces away from your ears Don. Todd, now read it again just as you did the first time.*

TODD: *The rain in Spain falls mainly in the plain.*

DON JONES: *I can't understand a thing! I wouldn't have believed it.*

DOCTOR: *Thanks Todd.*

ESTELLE JONES: *So, what do you suggest?*

DOCTOR: *Well, first let me explain a few things. Do you go to church Don?*

ESTELLE JONES: *He used to. But not for the past 3 years.*

DON JONES: *Well, I can't hear the preacher and at coffee afterwards I can't understand anybody. There's so much yacking.*

DOCTOR: *How about visiting your friends?*

DON JONES: *Well, I don't go out as much as I used to. Only with two or three guys I've known and hunted and fished with for the past 20 years.*

DOCTOR: *Belong to a union?*

DON JONES: *You bet. Brotherhood of Locomotive Engineers, Local 206.*

DOCTOR: *Go to the meetings?*

ESTELLE JONES: *No he doesn't anymore.*

DON JONES: *Why go to the meeting? I hear very little and I usually get that wrong.*

DOCTOR: *Often you get a word here and there, piece it together and make a proper remark?*

DON JONES: *That's right.*

DOCTOR: *But often you find they're talking about a railroad strike and you're talking about the pipeline and that's embarrassing, right?*

DON JONES: *Absolutely. That's exactly right. How come the other doctors didn't tell me all this?*

DOCTOR: *What other doctors?*

ESTELLE JONES: *Oh, Don!*

DON JONES: *Well, why not! I'll level with you. A couple of years ago I went to an ENT doctor in Anchorage. He examined me and told me what the trouble was and said, "Go get a hearing aid. Look'em up in the yellow section." Another doctor told me the same thing. I got an aid. I couldn't hear worth a damn with it. I went back to the hearing aid emporium but there was a health food store in it's place.*

DOCTOR: *Well, we're discussing this so you'll get what you pay for, learn about the care and feeding of hearing aids, know what to expect and so won't be mad at me or the people who fit you with the hearing aid.*

I send all my patients to the Telaquana Hearing Center in Anchorage. Phone ahead for an appointment and make it for early in the morning. If you just drop in you may have to wait. And if they've rushed, the fitting perhaps won't be as meticulous as it would be if they weren't being rushed. If you go in the afternoon all the school kids and everybody jam in there from 2-5; so get in, by appointment, at 9 in the morning. We'll give you their card with the phone number on it. We will also give you a copy of your hearing test for their use. And be sure you take Estelle and Todd with you.

DON JONES: *Why?*

DOCTOR: *Well, for one thing, Todd deserves a day off from school, now that it's Spring. And Estelle probably would like to go shopping. But seriously you are familiar with their voices and can note the changes the hearing aids make just as you have done with the speaking tubes you are using right now.*

DON JONES: *Okay. So what kind of hearing aid do I get?*

DOCTOR: *Well, there are over 50 models approved by medical authorities. Telaquana handles 6 of them. For the same reasons one person likes a Chevy better than a Ford or a Dodge better than a Buick you might like one type of aid better than another. The important thing is to get one there because you can get parts, batteries and service with a phone call. If you get an approved aid by mail order - well, you know how it is when you send for a part for your outboard motor. They send you the wrong part for the wrong model and they send it to Fairbanks with 24¢ postage due.*

DON JONES: *You can say that again! What if I don't like the aids?*

DOCTOR: *Well, you can arrange to rent them for a couple of weeks, but you have to buy the ear mold which has to be made to order and of course can't be returned.*

ESTELLE JONES: *That sounds fair enough.*

DON JONES: *How about in the shop. Won't the racket deafen me worse?*

DOCTOR: *No. There are controls and an on-off switch. That's what I meant when I said you'd have to learn to use the aids. You'll soon learn the settings for visiting, work, TV, union meetings and when you go disco dancing.*

ESTELLE JONES: *He hasn't danced with me since the Korean War.*

DOCTOR: *Well, I'd be glad to take you dancing anytime. They sure make grandmothers a lot cuter now than they used to. In the olden days they tended to look like wrestlers with a moustache.*

TODD: *Grandma, can I go out to the car?*

ESTELLE JONES: *Just a minute Todd. We're going to need your help so stick around another sec. Okay?*

TODD: *Oh, alright.*

DOCTOR: *Now, just a couple more things.*

Keep your ears clean with a thinned out Q-tip dipped in either after shave lotion or rubbing alcohol. If you don't, wax can build up in your canal here and plug the ear mold. Then your aid won't do you a bit of good. Don't clean your ears when somebody can hit your elbow by opening a door. If that happens the damage could be very serious.

TODD: *I'm leaving.*

ESTELLE JONES: *Please look after Dottie and say goodbye to the doctor.*

TODD: *Okay, grandma; goodbye doctor.*

DOCTOR: *Thanks Todd for your help.*

Now, only one more thing. You now hear only what you attend to closely and then only when it's loud enough. When you start with the hearing aid turn it on, you'll say, "My God, I can't stand the racket." You'll hear voices that sould like Donald Duck and background sounds you have forgotten like the fan you mentioned, the telephone, people talking, typewriters, a plane droning by, a distant truck rumbling along the highway - things people with normal hearing, hear but ignore. In other words you've got to learn to hear and ignore background sounds. And you've got to promise yourself and Estelle that you wear those aids everyday. If you wear the aids in your bureau drawer or only on Chinese New Years or during Yom Kippur they won't help you. Better give the $500 or $600 to the Salvation Army than to waste it on hearing aids you won't use. Seem reasonable?

DON JONES: *Yes it does. Say Doc, can those hearing aids make the high tones louder and not make the low tones too loud?*

DOCTOR: *That's one of the problems with all hearing aids but selective amplification is improving. And if the aid is turned on too loud or you get aids too powerfull for your needs, they'll be painful. These are the reasons for the distortion of sound. It's not hi-fi yet. But these little aids that fit on glasses, behind the ear or in the shell of the ear itself are marvels of microcircuitry. You should have seen the old aids. The wearer had heavy batteries pinned to the underwear and a big wire led up to the aid and nobody had thought of using two hearing aids. And besides, the sheer weight of two aids would have broken down their arches.*

ESTELLE JONES: *Suppose that all 6 aids Telaquana handles seem about the same, then what?*

DOCTOR: *Well, Mr. & Mrs. Chavis will help you decide, They are fine people. They don't use the hard sell. You'll like them. They know their stuff and with two exceptions I'll tell you about later, if you're interested, we have had no dissatisfied patients.*

DON JONES: *Well, that's about it, I guess.*

DOCTOR: *Well, if anything comes up that you haven't thought of you can always phone and if I'm not available I'll call you back. But just a second. Remember Don, you've become isolated from the world. Here's what happens. A new worker comes into the shop and says, "Morning Don." And you don't answer. He doesn't know you can't hear. The next day he says good morning again. No response. The third morning he walks in and ignores you thinking, why bother with this guy, if he doesn't want to talk to me I can get along just fine. And so you gradually become isolated. Nobody talks to you and finally you get to thinking they are talking* about *you and laughing* at *you.*

DON JONES: *Doc, you sure hit it right. You'd think you were deaf the way you describe all these things.*

DOCTOR: *Thanks. Also, as Todd said, he always touched you so you'd know he was there before he started talking. So, I've found it's a good idea to tell the people in the shop that you don't hear too well, that you have hearing aids to help but you'd appreciate their coming around in front of you before sounding off.*

ESTELLE JONES: *Even with hearing aids?*

DOCTOR: *Yes, even with hearing aids. And when new people come to call, tell them Don doesn't hear as well as he might and to be sure they get his attention before speaking. Better to have people know you have a slight hearing problem that you are trying to overcome then to be considered high-hat because you don't respond to a greeting or stupid because in answer to "How long have you lived in Anchor Point?" you reply, "83¢ a gallon."*

Epilogue: *Estelle Jones asked about the two exceptions. The first is a teenager. It's very hard to get them to use hearing aids. If Wayne Newton, Raquel Welch or John Travolta wore hearing aids, there is not a teenager in the country that would be without one. Yet, if they don't learn speech reading or use hearing aids when indicated they lose out socially, intellectually* *and the jobs they get and the people they marry. Often when given aids, the teenager does not want, they get "lost" or are ground underfoot "accidentally." Often they fall into the sink, the toilet or the bathtub and that, of course, means goodbye hearing aid.*

The Superior of St. Mary's Mission, solved this problem by having the youngsters (all deafened by neglected chronic ear infection) put their aids in their mail slots when not in class. Breaking and loss ceased. And knowledge increased. Soon the kids asked the Father if they could borrow the aids for the movies. Before long aids were no more the mark of the oddball than a pair of glasses.

The other problem case is the oldster living with, say, an active son and daughter-in-law and the grandchildren. Everyone but grandad has a voice as harsh as a tobacco auctioneers after a busy day in the market from yelling to make the old one hear. If they don't yell the old one imagines they are talking about him and when they laugh that they are laughing at him.

After much pleading the old one comes to the office and the middle generation says, "Grandad can't hear and we want to buy him a hearing aid but he thinks he has wax in his ears and that everybody mumbles. He is driving us nuts."

The old man sits there glowering at the doctor. And with his mental heels dug in, so to speak, he says clearly in the language of body and eye, "I'll be damned if I'll wear one of those things. Just stop mumbling, that's all. Speak up!"

Well, Estelle, I always tell the younger generation to forget it because the old ones just won't wear an aid. A nursing home or homicide are possible solutions but are not generally accepted. Other than love, patience and understanding there is, I suppose, an answer, but I don't know it.

CURTAIN as the orchestra plays Alaska's Flag.

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PHEOCHROMOCYTOMA CRISIS

Timothy A. Lamphier, M.D.

The possible lethal effects of pheochromocytoma makes this condition a rare medical emergency. Catecholamines are exclusively liberated by both tumors of the adrenal medulla and tissue from the neural crest which are known as chromaffin tissue. Although these tumors are rare, it is well to recognize the devastating clinical effects of excess catecholamines on the cardiovascular system, e.g. cerebrovascular hemorrhage, hypertensive crisis and congestive heart failure.

Pheochromocytoma is the most frequent surgical lesion of the adrenal medulla. The first published record of an association of hypertension and an adrenal tumor was reported in 1886 by Frankel. In 1946, Euler demonstrated that catecholamine was secreted by the adrenal gland and the sympathetic nervous system. Epinephrine is produced only by the adrenal medulla, whereas norepinephrine is secreted both by the adrenal medulla and the sympathetic nerve system.

Epinephrine is related to the utilization and mobilization of glucose. An over-production of epinephrine causes marked sweating, emotional irritability, hypertension and it may mimic hyperthyroidism.

Norepinephrine does not have any metabolic effects but is primarily a peripheral vasopressor. This tumor may occur in young children.

There are several causes which may precipitate the hypertensive crisis of pheochromocytoma. Local pressure on tumors in the pelvis or on the urinary bladder may bring about "micturition syncope".

Food stuffs such as cheeses high in tyramine and some wines may liberate excessive catecholamines. Monamine oxidase inhibitors are known to precipitate hypertensive crisis by increasing the tissue levels of norepinephrine by blocking intraneuronal metabolism. Certain drugs such as reserpine, methyldopa, guanethidine, and sympathomimetic amines may result in the release of amines. Some beans contain dopamine.

Pheochromocytoma may cause two types of hypertension: 1) sustained and 2) paroxysmal. Sweating may be so marked as to require multiple daily showers. In some cases, there will occur orthostatic hypotension which may be due to intravascular hypovolemia. This type of hypovolemia may be the result of decreased plasma volume and there is an accompanying elevated hematocrit. Some of these patients might produce excess erythropoietin and thusly a marked erythrocytosis.

Phoechromocytoma are made up of two groups:

1. Functioning chromaffin tumors (chromaffinomas).
2. Extra-adrenal functioning chromaffin tumors (paragangliomas).

Together they make up less than one percent of the hypertensive patient population.

Familial pheochromocytomas (with an autosomal dominant form of transmission) usually have extra-adrenal and multiple tumors.

Sipple's syndrome (multiple endocrine adenomatosis) is inherited as an autosomal dominant trait and consists of a traid of: 1) pheochromocytoma (bilateral adrenal tumors), 2) hyperparathyroidism, and 3) medullary carcinoma of the thyroid. The medullary carcinoma of the thyroid is derived from parafollicular "C" cells which produce calcitonin. Affected family members can be identified by an elevated calcitonin, especially in response to a calcium infusion.

A high occurrence of two neurocutaneous phakomatoses occur with pheochromocytoma:

1. Recklinghausen's Disease (neurofibromatosis), and

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2. Hippel-Lindau Disease (cerebellar and retinal hemangioblastoma).

These phakomatoses are found in ten percent of patients with pheochromocytoma. Pheochromocytoma has been found in young children and also in a fair number of patients with cyanotic heart disease.

In the Riley-Day syndrome (familial dysautonomia) . . . the accumulation of dopamine elevates catacholamines and thusly reflect a defect in the enzyme dopamine beta oxidase. It is characterized by:

1. A decrease in urinary VMA (vanilmandelic acid), and
2. An increase in homovanillic acid (HVA).

When pheochromocytoma occurs in pregnancy, the mortality rate approaches 50 percent for both fetus and the mother. It may be mistaken for toxemia of pregnancy. Surgery is mandatory when the diagnosis is made.

The differential diagnoses include crisis with similar clinical manifestations, e.g. arteriosclerotic heart disease with angina pectoris may present with hypertensive episodes. At times, elevated blood pressure with papilledema may be seen with subarachnoid hemorrhage or posterior fossa tumors, essential hypertension, myocarditis, glomerulonephritis, renal lesions, toxemia of pregnancy and psychoneurosis. Thyrotoxic crisis may exhibit features of pheochromocytoma crisis. The polyuria and hyperglycemia of diabetic coma may also similate pheochromocytoma. About 10 percent are mistaken for diabetes mellitus because of glycosuria. There is high incidence of cholelithiasis.

The common analage for the sympathetic ganglion cell and chromaffin tissue is the neuroblast. Such tumors and ganglioneuromas, chromaffinomas and neuroblastomas as well as pheochromocytoma arise from these cell types, i.e. neuroblasts.

Chromaffin tissue is found in the medulla of the adrenal, along the sympathetic chain (paraganglia) and occasionally in chemoreceptor cells such as the carotid body. Sometimes it may be identified in the organ of Zuckerkandl near the bifurcation of the abdominal aorta.

The recognition of a pheochromocytoma requires a high index of suspicion.

These patients may have attacks of severe headaches, palpitation, profuse sweating and tachycardia. Vasomotor changes such as blanching or pallor of the face and extremities may be present as well as flushing and warmth. Abdominal pain plus nausea, vomiting and anorexia may occur. Visual disturbances such as blindness and blurring may be a complaint. Loss of consciousness is rare.

Central nervous system manifestations include changes in sleep patterns, psychosis, tremulousness, numbness, paresthesias and hypertension are characteristic as well as aphasia, increasing nervousness, irritability and fainting. At times, there may be loss of weight, angina and dyspnea.

Cardiac problems include cardiomyopathy, congestive heart failure, cardiac hypertrophy and hypertensive encephalopathy.

There are often signs of neurocutaneous disease such as neuromas, neurofibromas, cafe-au-lait spots and retinal angiomas.

Hypertension may be sustained or paroxysmal or there is postural hypotension. Postural tachycardia or a change in more than 20 beats per minute may be present. Palpitation of a flank tumor occurs in 5 percent of patients.

Occasionally swelling of the tyroid, papilledema and retinal hemorrhage occur.

The excessive sweating may cause the patient to have multiple showers daily and the patient may be thought to have thyrotoxocosis.

Hypercatecholaminemia may cause cardiac arrhythmias. Sixty percent of these patients have polyuria.

In the biosynthesis and catabolism of catecholamines, the amino acid substrate is tyrosine which is produced from stored protein, dietary sources or hydroxylation of phenylalamine. Such enzymes as dopamine beta oxidase, tyrosine hydroxylase, adrenal medulla phenylethanolamine n-methyltransferase, monamine oxidase, aromatic l-amino acid decarboxylase and catechol ortho methyltransferase take part in these changes.

Ninety percent of pheochromocytoma are located in either or both adrenals.

Pheochromocytoma occur a little more frequently in the right adrenal as compared to the left. Only 3 percent are malignant. Ten percent of pheochromocytoma are bilateral and 10 percent are found in extra-adrenal locations. Rarely they are found in aberrant locations such as the chest, bladder or brain.

They contain varying amounts of epinephrine and norepinephrine with the latter predominating (50-90%). Norepinehprine producing tumors are more likely to cause sustained hypertension whereas the paroxysmal variety is more common with epinephrine. Pregnancy or trauma frequently are the precipitating factors and this condition is very common between the ages of 20 and 40.

Hypertensive crisis are controlled by two alpha adrenergic blocking agents:

1. **Phentolamine** - (Regitine) - which is of **short duration**. It blocks medullary hormone. It may cause nausea and vomiting. When 2 to 5 mg. are given

intravenously, give slowly because a long hypotensive effect may cause cerebral or myocardial infarction. The test is positive when the blood pressure falls to 35 mm/Hg. systolic and 25 mm/Hg. diastolic. The test is 75% accurate.

2. Phenoxybenzamine - (Dibenzyline) - which is of long duration.

When these two drugs fail, resort to the use of a beta-adrenergic blockers: propranolol (Inderal).

Fluid losses, e.g. profuse sweating, is corrected by volume expansion.

Special Tests:

1. Histamine is used as a provocative test agent in patients who are normotensive. It causes release of the medullary hormone. Prior to this test, the patient is:
    a. Kept in bed for several hours.
    b. 25-25 mg. of histamine is given intravenously.
    c. Marked elevations in blood pressure occur within one to two minutes.
    d. Collect 2 hour specimens just before and after the histamine injection.
    e. With a positive test, obtain catecholamine quantitation.
    f. Control a histamine elevated blood pressure with phentolamine.
2. The tyramine test depends on the direct release of catecholamines from nerve endings. A rapid intravenous bolus of 2 mg. of tyramine is given. The response is an increase in blood pressure within 40 to 60 seconds reaching a peak at 60 to 90 minutes. Tyramine and glucagon are safer provocative tests.

They contain varying amounts of epinephrine and norepinephrine with the latter predominating (50-90%). Norepinephrine producing tumors are more likely to cause sustained hypertension whereas the paroxysmal variety is more with epinephrine. Pregnancy or trauma frequently are the precipitating factors and this condition is very common between the ages of 20 and 40.

The following table from Bacchus outlines the clinical and laboratory procedure in disorders of catecholamine metabolism:

Clinical and laboratory procedures in disorders of catecholamine metabolism

Phentolamine (Regitine)	No significant in blood pressure	Blood pressure reduction of 35/25 mm Hg lasting for several hours (in pheochromocytoma)
Mistamine provocative test	No significant blood pressure elevation	Blood pressure elevation 60/35 mm Hg and exceeds cold pressor test
Tyramine	No significant blood pressure elevation	Blood pressure elevation of 20-80/40 mm Hg (in pheochromocytoma)
Urinary vanilmandelic acid	1.8-7.0 mg/24 hr	Markedly increased in pheochromocytoma
Urinary metanephrines	1.3 ug/24 hr	Markedly increased in pheochromocytoma
Urinary catecholamines	20-100 ug/24 hr	Increased in tumors of neural crest origin (neuroblastoma, ganglioneuromas) as a reflection of increased dopamine release; catecholamine levels 300 ug/24 hr all found in most patients with pheochromocytoma

With these chemical tests, certain drugs and food must be avoided two to seven days before and during the collection of urine samples. To be avoided are methyldopa, tetracyclines, vasopressors, monoamine oxidase inhibitors, citrus fruits, bananas, coffee and vanilla. Reserpine, guanethidine, thiazide diuretics and ganglionic blocking agents do not interfere with chemical assays.

Both urine and serum free catecholamines are increased with drugs containing catechollamines such as l-Dopa, methyldopa, eye drops, nasal decongestants and bronchodilators.

Norepinephrine is increased somewhat in:

1. congestive heart failure
2. emotional stress
3. ingestion of bananas

Total metanephrines are increased by:

1. MAO inhibitors
2. exogenous catecholamines

Urinary VMA is:

1. increased by nalidixic acid
2. decreased by mao-inhibitors

Urine vanilmandelic acid is a measure of catecholamine end-products.

Urinary "metanephrines" if elevated are fractionated into metanephrines and normetanephrines.

Elevated metanephrines without a comparable elevation of normetanephrine is consistent with increased epinehprine release and thereby suggests an adrenal medullary tumor.

Adrenal venography helps locate the site of tumor involvement. During the study, blood samples are taken from: 1) the adrenal vein on the right, 2) the renal vein on the left and 3) the inferior vena cava for the quantitation of plasma catecholamines.

Definitive management is surgical removal of the tumor and is the treatment of choice.

Since there may be multiple tumors, it is necessary to recheck urinary catecholamine levels postoperatively.

There are three phases in the treatment of pheochromocytoma:

1. Reduction of blood pressure during acute hypertensive crisis.
2. Maintenance and preparation of the patient for surgery.
3. Management of the patient during surgery.

The procedure for reduction of blood pressure:

1. Confine the patient to bed with the head elevated to 45 degrees.
2. Inject phentolamine (Regitine) an oc-adrenergic blocking agent intravenously 2-5 mg. every 5 minutes until the pressure is controlled.
3. Continue the same dose to maintain control every 2-4 hours. If shock intervenes, use vasopressor agent.
4. If atrial or ventricular arrhythmias or sinus tachycardia is present, give 1-2 mg. of propranol hydrochloride intravenously over a 5 minute period using EKG monitoring.

Maintenance and preparation of the patient for surgery:

1. Using the long acting alpha adrenergic blocking drug phenoxybenzamine (Dibenzyline) starting with 20-30 mg. and then increasing the amount daily by 10-20 mg. a day until the blood pressure is stabilized at a normal level. Mild postural hypotension may be present.
2. Control cardiac arrhythmias with propranolol with 20-40 mg. four times daily.
3. Avoid sodium restriction. If necessary use volume expanders such as whole blood, 5% albumin, or saline.

Management of the patient before and during surgery:

1. Continue drug therapy up to the day of surgery.
2. It is best to discontinue the long acting phenoxybenzanine several days preoperatively and substitute the short acting phentolamine.

Conclusion

Although rare, the diagnosis of pheochromocytoma is important. Undetected, this tumor is almost always fatal. The prognosis depends on how early the diagnosis is made. If the tumor is removed successfully before irreparable harm to the cardiovascular system has occurred, a complete cure is achieved. It is estimated that in the United States, 800 deaths a year due to unrecognized pheochromocytoma.

The single most reliable test is the assay of plasma catecholamines.

In most cases, clinical acumen alone is not sufficient to diagnose pheochromocytoma.

Plasma catecholamines concentration are far better predictors than either VMA or metanephrines. A value of 1000 ng. per liter (5.91 n.mol. per liter) or less is considered to rule out pheochromocytoma and values between 1000 and 2000 ng. per liter are considered equivocal.

A glucagon test is performed only if the clinical findings are highly suggestive of pehochromocytoma. A positive glucagon test requires a rise in blood pressure of a least 20/15 mm/Hg above the response to a cold pressor test and a clear increase (at least three-fold or greater than 2000 ng. per liter) in simultaneously measured plasma catecholamines. Because of the proved reliability of this determination (plasma catecholamines) and the speed and ease with which it is carried out, measurement of plasma catecholamines may replace screening tests based on urinalysis.

The following flow sheets are useful for following the signs, symptoms, laboratory data and treatment of pheochromocytoma.

PHEOCHROMOCYTOMA CRISIS
FLOW SHEET
TREATMENT

	Date
	Time
	Ideal treatment is surgical removal of tumor
	Three phases of treatment a reduction of blood pressure during hypertensive episodes
	b maintenance and preparation of patient for surgery
	c. management of patient during surgery
	1 REDUCTION OF BLOOD PRESSURE a confine patient to bed with head elevated to 45 degrees
	b. phentolamine hydrochloride alpha adrenergic blocking agent IV 2-5 mg q 5 min
	c continue same dose every 2-4 hours to maintain control
	d if sinus tachycardia or atrial or ventricular arrhythmias, (1) give 1-2 mg. propranolol hcl over 4-5 min (2) EKG monitor (3) Inderal may be given orally at 20-40 mg q 6 hours
	2 MAINTENANCE AND PREPARATION OF PATIENT FOR SURGERY a phenoxybenzamine (Dibenzyline) long acting alpha adrenergic blocking agent Initial dose 20-30 mg. and increased 10-20 mg. daily until stabilization of blood pressure
	b control cardiac arrhythmias with propranolol orally 20-40 mg. 4 times daily
	c avoid sodium restriction because of decreased intravascular volumes. Volume expanders (whole blood, saline, 5% albumin may be needed)
	3. MANAGEMENT OF PATIENT BEFORE AND DURING SURGERY a. continue drug therapy up to day of surgery
	b discontinue long acting agents (e.g phenoxybenzamine) and replace with short acting agents (e.g phentolamine)
	c substitute phentolamine 5-7 days preoperatively

AMA Rates High in New Gallup Poll

The American Medical Association—as an organization—has received high marks in two public opinion polls on the credibility of major social institutions. The AMA ranked higher than all other groups in two surveys of public confidence conducted by the Gallup Organization.

HEALTHY DIETS

Vegetarian diets are becoming more popular today as more and more people become concerned about eating too many fats. But, according to two Baltimore physicians writing in an American Medical Association journal, a **pure** *vegetarian diet does not offer enough nutrition to growing children.*

A true vegetarian diet – one that does not allow milk and eggs – does not provide all the nutrients a child needs.

There are several different forms of vegetarian diets. Lacto-ovo-vegetarians eat eggs and drink milk. Lacto-vegetarians refuse to eat eggs but they will drink milk. Those who follow the strictest vegetarian diet are called vegans. They reject any food associated with animals.

The two Baltimore physicians say that children can get along all right on the less rigid types of no-meat diets if they are properly planned. But children fed a pure vegetarian diet can experience problems in normal growth and development.

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U.S. Patent 2,985,558

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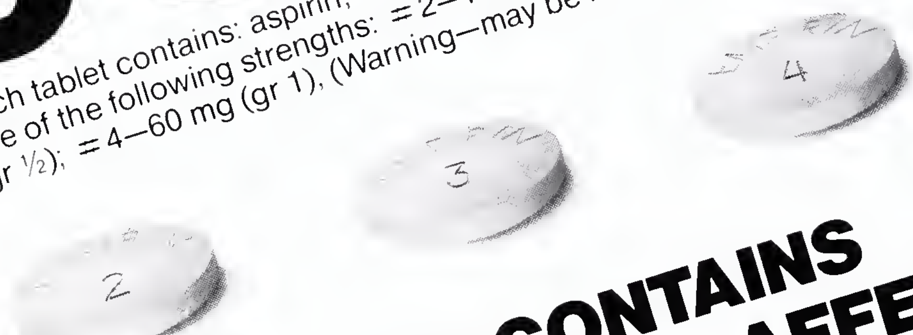

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PHEOCHROMOCYTOMA CRISIS
FLOW SHEET
SIGNS AND SYMPTOMS

	Date
	Time
	Attacks of severe headaches
	Palpitation
	Tachycardia
	Profuse sweating
	Sensation of warmth
	Precordial pain
	Vasomotor changes a pallor or blanching of face or extremities b. flushing of face or extremities
	Abdominal pain (epigastric)
	Anorexia
	Nausea
	Vomiting
	Hyperglycemia
	Hypermetabolism with normal T_4
	Visual disturbances a blurring b blindness
	Increased appetite
	Polyuria
	Labile hypertension
	Central Nervous System Manifestations: a changes in sleep patterns b aphasia c. loss of consciousness (rare) d psychic changes e increased nervousness f increased irritability g. dizzyness h. fainting i tremulousness j. hyperventilation k. paresthesias l numbness m psychosis
	Dyspnea
	Loss of weight
	Cardiac arrhythmias
	Angina
	Myocarditis
	Cardiac hypertrophy
	Cardiomyopathy
	Congestive heart failure
	Hypertensive encephalopathy
	Postural tachycardia (more than 20 beats/minute
	Postural hypotension
	Signs of neurocutaneous disease a neuromas b neurofibromas c. retinal angiomas d cafe-au-lait spots
	Hypertension either a. sustained b. paroxysmal
	Mild elevation of basal body temperature
	Abdominal flank tumor (in 5%)
	Transient swelling of thyroid
	Retinal hemorrhage
	Papilledema

PHEOCHROMOCYTOMA CRISIS
FLOW SHEET
LABORATORY

	Date
	Time
	Hyperglycemia (elevated in 60% of patients)
	Increased hematocrit elevation
	Increased serum free fatty acids (elevated)
	Increased catecholamines in blood (elevated)
	Increased catecholamines Increased metanephrines } IN URINE Increased vanilmandelic
	Negative cold pressor test blood pressure rise or fall of less than 20/15
	T_4 is normal
	Glycosuria and/or hyperglycemia
	Hypertension attack by massage of either flank (rare)
	Provocative tests hyistamine, tyramine and glucagon a If histamine releases medullary hormone and blood pressures, test is positive b tyramine and glucagon tests are safer
	Challenge patient with blocking agent test (during hypertensive phase) a Phentalamine (Regitine) 2-5 mg rapidly intravenously It is an alpha adrenergic agent and blocks medullary harmone. Blood pressure falls b Stop all sedatives and anti-hypertensive agents 24 hours prior to the test. c Inderal (propranalol) is a beta adrenergic agent and should be used to control arrhythmias
	Assay of urinary catecholamines on 24 hour urine specimens a test for VMA b assay of blood & urine epinephrine c. assay of blood & urine norepinephrine d high epinephrine levels favor tumor localization within the adrenal
	X-ray visualization of the tumor a via intravenous urogram OR b. retroperitoneal oxygen study OR c angiography d adrenal venography
	Intravascular hypovolemia
	Tyroid profile

HERPES: A FAMILY OF VIRUSES

You've probably been hearing a lot lately about people who have "herpes" infections. According to the American Medical Association, herpes belonges to a family that includes many viruses. But the one most in the news is herpes simplex. This is the one that causes clusters of small, painful blisters that appear either around the mouth or on the genitals. Genital herpes is spread to other people through sexual contact. There is no cure yet for genital herpes but there is now promising research on two drugs that may provide a cure in the near future.

American Medical Association
535 N. Dearborn St.
Chicago, IL. 60610

PRESIDENT'S PAGE

David Johnson, M.D.

Choosing a topic for my first "President's Page" has proven a difficult task. There are temptations on the one hand to attempt the cosmic solution, to strive to set right in a few well chosen lines and phrases the medical ills of the State. On the other hand, there is the old familiar history and general exhortation routine. Any who read further will discover that I have yielded more to the latter than the former.

Communication is the goal of many activities in contemporary American Society. Indeed, sociologists categorize America as a communications society, having passed in turn through both agricultural and industrial phases. Much of our role as physicians is communication, as we apply our special knowledge to our patient's problems. I would like to consider both communication between patients and physicians and communications among physicians.

All of us have had patients report outlandish statements some previous physician has made to them. All of us have learned, some in harder ways then others, that outlandish and impossible statements are usually just exactly that; instances of poor communication of good ideas rather than good communication of poor ideas. We have learned to hedge our responses to patient's tales and to remain noncommittal. Most of us demur, with variations on the theme, that we were not there and really cannot comment. We have learned that little is gained and much can be lost by siding with or arguing against a former physician's reported statements.

Similarly all of us have had the experience of having a patient return from a marvelous marble medical Mecca with tales of being assured that they were lucky to have survived the ministrations of their local medical doctor and made it to MMMM. That message may be communicated by an attending physician, a nurse, a clerk, a house officer or a janitor but it is communicated just the same. The response we have to such experiences seems to follow a sequence from incredulity through outrage to bemusement as our days as house officers slip behind us.

In both of these examples of communication problems the attending physician has a decisive role. The physician can communicate clearly in almost every case if he or she will take the time to do so. Listening carefully to patient's questions, hearing the patient repeat advice or summarize explanations and leaving time for open-ended questions at the conclusions of a patient's visit are all useful techniques to improve patient-physician communication.

Sadly, sometimes we as physicians communicate misinformation regarding one another, to our mutual discredit and detriment. At other times we as physicians make sweeping statements or jump to hasty conclusions without first collecting necessary facts and figures. If we as physicians and as a medical society are to have an effective voice, we must learn better to communicate with each other and to communicate our collective thoughts to others more clearly.

In traveling through Alaska en route to and from the annual meeting in Mt. McKinley Village, I was impressed again by the physical immensity of our state. In driving from Haines to Tok, Palmer, Anchorage, Seward, Fairbanks and Skagway, I covered over 2,500 miles and still only a small part of Alaska. In talking with physicians before, during and since the annual meeting, I am convinced that there are perceived differences among us at least as vast as the geographic distances separating us. In hearing Anchorage versus Fairbanks, a government-employed versus private practice, surgeon versus non-surgeon, specialist versus specialist and on and on, it seems like nothing as much as the old (read 1950's) Kingston Trio song that includes the phrases, "Italians hate Yugoslav's, South Africans hate the Dutch, and I don't like anybody very much!"

I believe that we must be scrupulously careful to collect facts exhaustively before we comment adversely regarding one another. In checking out rumors related to me, I find that the most scandalous allegations are either totally unfounded or fabricated much more of the relator's prejudices than the subject's words and deeds. Such gossip serves no positive purpose and deserves no credence. Juicy doctor's-lounge can-you-top-this rhetoric and innuendo is harmful to all of us and should be stopped.

We must learn to communicate within ASMA if we are to be a viable group. Committees and the Council must learn to do more of our work in writing and less of our work verbally and off the top of our heads. We face many complex issues that demand a great deal more thought than we can hope to apply in a few hours gathered around a table. As president, I feel a keen responsibility to inform the membership of the activities of the executive committee and of the council. I intend to stress to each committee chairman and member the importance of written agendas, hard-copy facts and figures, drafts of position papers and written reports to the council upon which to base our decisions.

My desk is daily nearly buried by a multitude of efforts at communication. Some of the communications are personal: these are valued and considered first. Some are impersonal but invited: these include practice-related correspondence, business matters, subscription journals, ASMA and AMA materials and a large sheaf from the Health Systems Agency on whose board I am completing a term. All these materials are sorted and processed as necessary. Finally, some are impersonal and uninvited; throw-away journals, drug advertisements, catalogs and solicitations for everything from exotic cattle to political candidates to insurance schemes and goodness knows what else. No physician has any shortage of communications. Add all the communications efforts we share with everyone else and the total is truly overload in every sense of the word: there is simply not enough time. Sorting through the barrage of mail to find the important ideas and challenges is an ongoing effort. Yet I believe that we in ASMA must do more of our business in writing.

At the same time, the leadership of ASMA is going to make a concerted effort to visit each of the component societies during the coming year. Person-to-person encounter remains the most immediate and broadly effective means of communicating ideas and attitudes. I believe that as we learn more about each other, we will be able to indentify common goals more easily and work together.

ASMA can do what you as members want only if you share your ideas with the leadership. I encourage you to talk with your councilors and officers as opportunities are available to call us or write us. Specifically, I invite you to communicate with me. I won't promise to do exactly what any individual one of you might ask or tell me to do, but I do promise to consider each suggestion carefully and to take personal responsibility for my decisions and actions. Altogether, there are about 600 physicians in Alaska. I believe that we can accomplish a great deal if we communicate effectively and act together.

HAWAII, KAUAI, MAUI, OAHU furnished vacation condominium apartments. RESERVATIONS, HAWAII, Suite C-207, Kukui Plaza, 50 S. Beretania St., Honolulu 96813. Toll Free 1-800-367-5250.

HOW TO CUT HEALTH CARE COSTS

The American Medical Association says there are some simple steps you can take to keep your health care costs down.

If your physician writes you a prescription, ask if there is a generic substitute that is equally effective. You shouldn't decide on your own to get a generic drug since the quality is not always the same. Your physician will know which ones are good.

Ask your doctor to recommend a local drugstore that offers prescriptions at a lower cost - - the AMA urges physicians to offer this type of assistance regularly.

Be sure your doctor knows of all the drugs you're taking, even non-prescription medication. Certain combinations of drugs are harmful.

And follow the doctor's advice. If he says to take an antibiotic for seven days, don't stop after four because you feel better.

Most importantly, take responsibility for your own health and you'll cut medical costs. Don't smoke. Eat sensibly. Exercise regularly.

It may sound like old-fashioned advice but can you afford to ignore it?

American Medical Association
535 N. Dearborn Street
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Your Business can be one, too.

Red Cross needs individual volunteers, and donors of blood and money, by the millions.

But we need even more help. We need the solid support of American Business. And we never needed it more.

If your business is already helping, by organizing blood drives, and by supporting payroll deductions—either directly for the Red Cross, or through the local combined fund drive—the whole community owes you thanks. And we thank you, too.

Last year, with help from our friends, we offered major aid at over 30,000 disasters—from typhoons, to local (but just as devastating) house fires.

We were able to help the elderly with practical programs, we helped veterans by the hundreds of thousands, we taught people by the millions to swim or swim better. And that's just the tip of the iceberg.

Think of America without The American Red Cross.

And you'll know why we need your business as a Red Cross Volunteer. In your community. And all across America. Contact your local Red Cross Chapter to see how your company can become a volunteer.

Red Cross. The Good Neighbor.

RECIPIENT OF THE PRESIDENT'S SPECIAL AWARD FOR DISTINGUISHED SERVICE

JOSEPH RIBAR, M.D.

Delegate to the AMA House of Delegates
1956 - 1979

The great criticism of physicians as a class is that we live in a narrow world oblivious to the problems of those who have occupations, triumphs, tragedies and interests outside the field of medicine.

No matter how grand we may become technically, our opinions are not held in high esteem by the leaders of the real world. As a class we are not held in high esteem by the FAA, bankers, politicians or the business community because our preoccupation with medical matters has narrowed our horizons.

Occasionally, among physicians, there arises a figure that towers above the rest of us and commands the respect of the real world outside of medicine because that physician has learned enough about the non-medical world to deserve its respect. Among the very few who have managed this in Alaska is our colleague and delegate to the House of Delegates of the AMA from 1956 through 1979, Dr. Joseph M. Ribar.

Born and raised in Tacoma he was valedictorian of his high school class. Upon graduating from the University of Oregon School of Medicine he served his country two years as a medical officer in the United States Navy. Following that in 1953 he moved to Alaska and since then has been a partner in the Fairbanks Medical and Surgical Clinic in the private practice of General Medicine.

As a physician his has been a busy and demanding life. But in spite of this he willingly and ably served as our Delegate these many years. During these years he earned the respect of Delegates from other states and made his fellow Delegates aware of the problems of Alaska's patients and Alaska Medicine.

As a Delegate he had to grapple with such problems as malpractice insurance, the incursions of various cults ever seeking the back door into the practice of medicine, the increasing number of paramedical technicians who again without graduating from medical school or having any medical training demanded the privileges of those licensed by our state to practice medicine. In our name he grappled with the problems of chiropractic and its suit against the AMA, the ever present problem of federal health insurance which, like so many other medical programs instituted in the public interest, soon became economic footballs kicked about by politicians.

Joe Ribar's annual reports to the Alaska State Medical Association of his activities each year were well worth reading today and can give any interested physician a panoramic view of the development of medicine as it has been practiced in Alaska over the past 25 years.

Important as these medical activities have been they are well balanced by Joe's extra-medical activities. He has been a member of the Fairbanks Chamber of Commerce for many years and a director from 1955 through 1959. He was elected to the City Council in 1959. In the years 1960 and 1962 he was elected Mayor of Fairbanks which stands as a testimonial to the high regard in which Joe was held not only by the medical community but by men and women in all walks of life.

In 1962 he received the A.H. Robins award as the outstanding physician in Alaska and the VFW award for community service.

Physicians are often criticised for treating disease with greater interest than preventing it. As a counter to this accusation Joe Ribar served as a member and director of the American Cancer Society. His interest in our greatest resource, our youth, is shown by his having served on the executive council of the Boy Scouts of America. He served two years on General Mundy's Citizens Advisory Committee.

The first few years of his service as Delegate were indeed lonesome but as time went on during his long service to us his fellow physicians he sought counsel of such stalwarts as J. Ray Langdon, M.D. (our Alternate Delegate), Paul Isaak, M.D. and James Lundquist, M.D. of Fairbanks.

Joe was always available to any physician who wished his advice or counsel on any subject and was easy to reach from as far away as Ketchikan and as close by as the hospitals in Fairbanks.

Now that Joe Ribar has stepped down from his long and productive service as a Delegate to the AMA, we owe him this testimony of our graditude, certainly for the things that he did for our patients and for our profession but even more for what he did and stood for as a humanitarian and a gentleman.

Prepared by MHF
Milo H. Fritz, M.D.

ALASKA STATE MEDICAL ASSOCIATION
35th ANNUAL MEETING

EXHIBITORS

Abbott Laboratories - James D. Chadwick
Armour Pharmaceuticals - Tom Kinman
Bristol Laboratories - George Mooney
Burroughs Wellcome Company - Bruce A. Bowman
Eli Lilly & Co. - Paul Mitchell
E.R. Squibb and Sons, Inc. - Wayne Mooney
Geigy Pharmaceuticals - Frank Comar
McNeil Laboratories - Linda Sion
Ortho Pharmaceuticals - Robert C. Nelson
Pfizer Laboratories - Steve Blaske & Ray Dickhaut
Schering Corporation - Frank Visger & Norman E. Wanek
Syntex Laboratories - Charles "Bud" Phillips
U.S. Army Medical Department - Col. Arthur W. Buswell, M.D. & Maj. Robert Tanaka
William H. Rorer and Compnay - Dean H. Gray
Wyeth Laboratories - Angie Larson

CONTRIBUTORS

A.H. Robins Company
Bristol Laboratories
Dow Chemical, USA
Parke Davis and Company
Ross Laboratories
Smith Kline Corporation
Stuart Pharmaceuticals
Wyeth Laboratories

THE A.H. ROBINS COMMUNITY SERVICE AWARD

The recipient of the A.H. Robins Community Service award was raised in Alaska, then left our state to complete college, medical school and residency in family practice. He returned to his home town where he has established a busy solo medical practice. He is highly regarded by his patients and his colleagues alike. He is a fly fisherman and an outdoorsman. He is married with a lovely wife and a young son and daughter.

He has served his community in three major areas. First, he has been heavily involved in upgrading emergency medical services in his home town and the surrounding area. He has served with distinction in regionwide education and training programs. Second, he has taken strong and sometimes unpopular stands in promoting his personal convictions regarding use of land and other natural resources. Third, he has become involved in local politics and in the activities of the city council.

In recognition of his integration of medical practice and civic activities, the 1980 A.H. Robins Community Service Award is given to family physician, THOMAS H. WOOD, M.D. of Petersburg, Alaska.

HEADACHES

Next time you get a headache, try to identify the cause before you take a pain pill. According to the American Medical Association, headaches can be triggered by some surprising culprits such as the food aditives you find in hot dogs, caffeine and even chocolate. Tension headaches, that are accompanied by stiff neck muscles are best treated with heat. Of course drugs are appropriate when the headache is diagnosed as a sympton of disease.

American Medical Association
535 N. Dearborn Street
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ASMA RESOLUTIONS AT McKINLEY VILLAGE

Resolution No. 80-1
Subject: Consumers and Providers

WHEREAS, physicians and their families and dependents, commonly called "providers", are as liable to illness, hospitalization, death with consequent financial drain as any other persons, commonly called "consumers", and

WHEREAS, members of the medical profession and their families and dependents are members of the public, sharing fully with the public the cost of government, and also share as fully the public's concern over costs and quality of medical care, and

WHEREAS, the medical profession by training and experience possesses talent in medical care not shared by the general public, therefore

BE IT RESOLVED, that "provider-consumer" distinction in medical care and in planning and governmental agencies be declared inappropriate, and

BE IT FURTHER RESOLVED, that Association members, officers and members of various planning and governmental agencies be urged continuously to propound their skill as "providers" while asserting as not debateable their full and equal voice as "consumers".

Resolution No. 80-2
Subject: Maximum Allowable Relative Value Fee Schedules (MARVFS)

WHEREAS, relative value studies were never intended to compare the monetary value of medical services between medical and surgical disciplines, or compare the value of medical or surgical services with technical, laboratory or radiological procedures, and were specifically designed absolutely to prevent such cross-referencing and comparison, and

WHEREAS, the imposition of such monetary relative values on the medical profession by any external agency is demeaning to the profession as a whole and to its individual members and would be inherently inequitable for many reasons, and

WHEREAS, the mandatory imposition of MARVFS on the profession will

- (a) inevitably produce dissension and strife within the profession, and
- (b) degrade the practice of primary care by eliminating economic distinction from para-professionals, and

WHEREAS, government at all levels clearly intends to use MARVFS to control professional fees, and

WHEREAS, the MARVFS will inevitably become a minimum fee schedule in conflict with FTC ruling, and

WHEREAS, the State Department of Health and Social Services and Congress through s505 intend to impose MARVFS for Medicaid and Medicare, and

WHEREAS, this will degrade and ration medical care for the American people, increase bureauracy, and produce minimal, if any, cost saving; therefore

BE IT RESOLVED, that the ASMA reaffirm the stand of the Anchorage Medical Society, the Fairbanks Medical Association, the Providence Hospital Department of Medicine, the ASMA Council and the ASMA Ad Hoc Committee on Medicaid, that MARVFS is unacceptable as a basis for reimbursement, and

BE IT FURTHER RESOLVED, that this resolution be conveyed to the AMA, state medical associations, major specialty societies, academies and colleges urging them to refuse to cooperate in formulation of a national MARVFS, and

BE IT FURTHER RESOLVED, that this resolution appropriately modified, be introduced to the AMA House of Dlegates at its next meeting.

Resolution No. 80-3
Subject: Mandatory Continuing Medical Education

WHEREAS, no problem has been demonstrated in Alaska which could be solved by compulsory CME; and

WHEREAS, no proof exists that compulsory CME, where implemented, has significantly altered the quality of medical care or has any bearing on public health, safety or welfare; and

WHEREAS, compulsory CME increases the cost of medical care and decreases its accessibility; and

WHEREAS, CME regulations ignore individual physician's tested, established self-educational patterns and techniques, and have many other deficiencies, including easy evasion; and

WHEREAS, the learning process is willful and voluntary and cannot be compelled; therefore

BE IT RESOLVED, that the ASMA exhort the State Medical Board to assess what effects, if any, on patterns and quality of medical care are achieved by the regulations, at what costs; and

BE IT RESOLVED, that the ASMA begin education of appropriate legislators on the growing national concern that compulsory CME is wasteful, costly and ineffective.

Resolution No. 80-4
Subject: Opposing National Catastrophic Illness Legisation

WHEREAS, the term "castastrophic" is relative lending itself to variable interpretation and political exploitation; and

WHEREAS, a mandatory national catastrophic illness plan could be converted to total national health insurance by administrative fiat; and

WHEREAS, in this way Congress could escape the onus of having enacted national health insurance; and

WHEREAS, proposed national catastrophic health insurance has sections allowing control of physician's fees in order, purportedly, to control costs; therefore

BE IT RESOLVED, that the ASMA oppose national catastropic illness legislation and the position be forwarded to Delegates to present to the AMA House of Delegates meeting in July.

Resolution No. 80-5
Subject: Relations of Physicians with Third Parties

WHEREAS, physicians provide health care to individual persons as patients; and

WHEREAS, the doctor-patient relationship is one of mutual choice, respect and confidence; and

WHEREAS, patients may have arrangements with any of a wide variety of third parties, such as insurance companies or government agencies, to assist them in paying for services provided to them by their physicians; and

WHEREAS, the physician's relationship is with the individual patient and by definition not with the third party; therefore

BE IT RESOLVED, that the ASMA hereby recognizes and acknowledges that a physician owes no duty to serve any third party, public or private, but rather owes the duty only to the patient, and

BE IT FURTHER RESOLVED, that the ASMA recognizes that free mutual choice between physicians and patient is essential to satisfactory health care; and

BE IT FURTHER RESOLVED, that the ASMA recognizes no implicit or explicit responsibility for any physician to participate in any third party payment program.

Resolution No. 80-6
Subject: Unneeded Federal Programs

WHEREAS many individuals, organizations and elected officals are declaring the importance of cutting federal spending; and

WHEREAS, many federal health programs cannot be cut without decreasing availability of health services to those Americans relying upon them; and

WHEREAS Professional Standards Review Organizations (PSRO's) have largely proven not cost-effective, and have duplicated medical staff scrutiny on medical records, tissue and utilization review committees; and

WHEREAS, Health Systems Agencies (HSA's) have been hampered since the beginning by voluminous federal regulations, have been tied to federal official approvals and directives to the virtual extinction of meaningful local health planning and local decision-making and have, from inception, never been empowered to make a single decision not reversible by the Secretary of Health and Human Services; and

WHEREAS, federally funded Health Maintenance Organizations (HMO's) are by legislative necessity duplicative of existing health services, are largely failed experiments when federal funding is withdrawn and are specifically brought into being only where marketplace decisions have preciously been made not to construct them; and

WHEREAS, absence of all three of these federal programs would not remove current health services for one single individual now being served; therefore

BE IT RESOLVED that the Alaska State Medical Association identify these three programs as excellent examples of federal health spending worthy of elimination; and

BE IT RESOLVED that we support the withdrawal of all federal funding from these programs and legislative removal of all the web of federal regulations developed by these programs.

Resolution No. 80-7
Subject: PSRO

WHEREAS, privacy of records and a patient-physician confidentiality are necessary for quality medical care; and

WHEREAS, effective medical peer review requires confidentiality of all peer review records; and

WHEREAS, the federal government, through the Freedom of Information Act and a recent U.S. District Court decision discouraged frank and candid discussion of cases under review and created risks for patient and physician alike;

BE IT RESOLVED, that the Alaska State Medical Association withdraw all support and encouragement for PSRO.

Resolution 80-9
Subject: Alaska Hospital and Medical Center, Inc.

WHEREAS, the Municipility of Anchorage and the State of Alaska need as a vital resource for the health care of the people, the Alaska Hospital and Medical Center to remain as a viable community hospital, and

WHEREAS, the following representative groups and agencies have expressed the will of the people to have Alaska Hospital remain a community hospital:

Providence Hospital Medical Staff
Alaska Hospital Medical Staff
Providence Hospital Planning Congress
Anchorage Municipal Assembly
Anchorage Medical Society
Alaska State Medical Association
Anchorage Chamber of Commerce
Alaska Public Interest Research Group; and

THEREFORE, THE ALASKA STATE MEDICAL ASSOCIATION RESOLVES that the Governor call a special meeting of the Alaska State Legislature to bring to a final vote legislation pending on the Alaska Hospital and Medical Center, Inc.

Resolution No. 80-10
Subject: Separate Department of Health & Social Services

WHEREAS, the Alaska State Legislative Research Agency has requested the opinion of the Alaska State Medical Association concerning the division of the Department of Health and Social Services into two separate departments; therefore

BE IT RESOLVED, that the Committee on Government Medical Programs study the question of separate Departments of Health and of Social Services and prepare a report to be submitted to the ASMA Council prior to January 1, 1981.

Resolution No. 80-11
Subject: Thanking the Exhibitors and Contributors

WHEREAS, the support of the drug companies and manufacturers of medical equipment and surgical supplies is appreciated; and

WHEREAS, without their support the Convention would hardly be possible, and WHEREAS, much knowledge is gained by their presentation, now therefore

BE IT RESOLVED, that the ASMA thank these companies and especially their representatives for their gracious assistance.

Resolution No. 80-12
Subject: ASMA Convention Committee

WHEREAS, the physicians of the Convention Committee, specifically Keith Brownsberger, Speaker Chairman, and Rodman Wilson, Logistics Chairman, have given so generously of their time and efforts; and

WHEREAS, the convention has been an outstanding success because of their efforts, now therefore

BE IT RESOLVED, that they be given commendation for their outstanding work and efforts to make this convention a success.

Resolution No. 80-13
Subject: Thanking the Management and Staff of Mt. McKinley Village Hotel

WHEREAS, the accomodations and environment of this convention have been excellent and most enjoyable; now therefore

BE IT RESOLVED, that we express our appreciation to the management, Mr. Gary Crabb, and his fine staff for their assistance in making this a very memorable and successful meeting.

Resolution No. 14
Subject: Thanking the National Park Service and Staff of Mt. McKinley Park Hotel

BE IT RESOLVED, that we express our appreciation to the National Park Service and the Staff of Mt. McKinley Park Hotel for their assistance and cooperation in making the 35th Annual Meeting of the Alaska State Medical Association a success.

Resolution No. 80-15
Subject: Thanking the Anchorage Medical Society

BE IT RESOLVED, that the members of the Anchorage Medical Society be thanked for generously hosting the cocktails and other libations for the President's Banquet at McKinley Village Hotel.

Resolution No. 80-16
Subject: Thanking the Speakers

WHEREAS, the time and efforts of the speakers of this meeting is appreciated; and

WHEREAS, the meeting is made much more worthwhile with this scientific enterprise; now therefore

BE IT RESOLVED, that the ASMA express their heart-felt thanks to the speakers who have made this convention a success.

Resolution No. 80-17
Subject: Kodiak Area Native Association Clinic

WHEREAS, the Kodiak Area Native Association has applied for and been approved a federal grant for the establishment of a medical health clinic in Kodiak; and

WHEREAS, the initial intent of the project was to establish a central base for a physician supervisor of physician extenders in outlying native villages and communities; and

WHEREAS, the present plan is to establish a clinic in Kodiak for medical care for all people; and

WHEREAS, the eatablished private and Public Health Service physicians are now adequate to meet the needs of the Kodiak communities; therefore

BE IT RESOLVED, that the Alaska State Medical Association be opposed to the establishment of a government supported and subsidized medical office in Kodiak by the Kodiak Area Native Association, which would compete directly with private physicians. We also would oppose the establishment of similar subsidized, competing facilities in any other area of the State.

Resolution No. 80-18
Subject: Health Planning

WHEREAS, those most immediately and directly affected by health services decisions are those most qualified to make major decisions regarding those services; and

WHEREAS, Alaska has a diversity of health services available varying from no services at all to major medical centers with comprehensive health services; and

WHEREAS, many national norms for services simply are not applicable in Alaska, therefore

BE IT RESOLVED, that the Alaska State Medical Association affirm its support of strong, locally-based health planning at the local, regional and state level; and further

BE IT RESOLVED, that the Alaska State Medical Association reaffirm that physicians must play a significant vote in any valid health planning effort; and further

BE IT RESOLVED that the Alaska State Medical Association carefully monitor health planning activities at local, regional and state levels; and further

BE IT RESOLVED, that the Alaska State Medical Association continue to offer assistance to local, regional and state health planning bodies in selecting strong physician representatives to those bodies; and further

BE IT RESOLVED, that the Alaska State Medical Association urge state, regional and local government as well as voluntary funding for health planning in Alaska, in order that Federal bureaucracy and overregulation be avoided.

Medical Care May Aid Hay Fever Sufferers

Hay Fever Hits Many

Why do they call it hay fever?

This discomforting disease was named by a London physician who noticed that people experience the symptoms (sneezing, runny nose, itching, swollen eyes) during the haying season in England. Americans have adopted the name, despite the fact that the misery is caused by many things besides hay and is rarely accompanied by a fever.

Hay fever is an allergic reaction to some ordinarily harmless substance in the air, the American Medical Association points out.

Most of the ten million American victims are allergic to the pollen from various trees, grasses and weeds, especially ragweed. The hay fever season for a particular person occurs when the plants to which he is sensitive are pollinating. For most sufferers, the season is between early spring and late fall.

Those allergic to house dust, mold spores, and animal fur may sneeze all year round. Most discomfort is temporary, but one third of the untreated cases will develop into asthma.

Let your family doctor help identify the cause of your hay fever. For temporary relief he may recommend antihistamines and eye drops, air conditioning and air purifying devices, or a vacation in another part of the country.

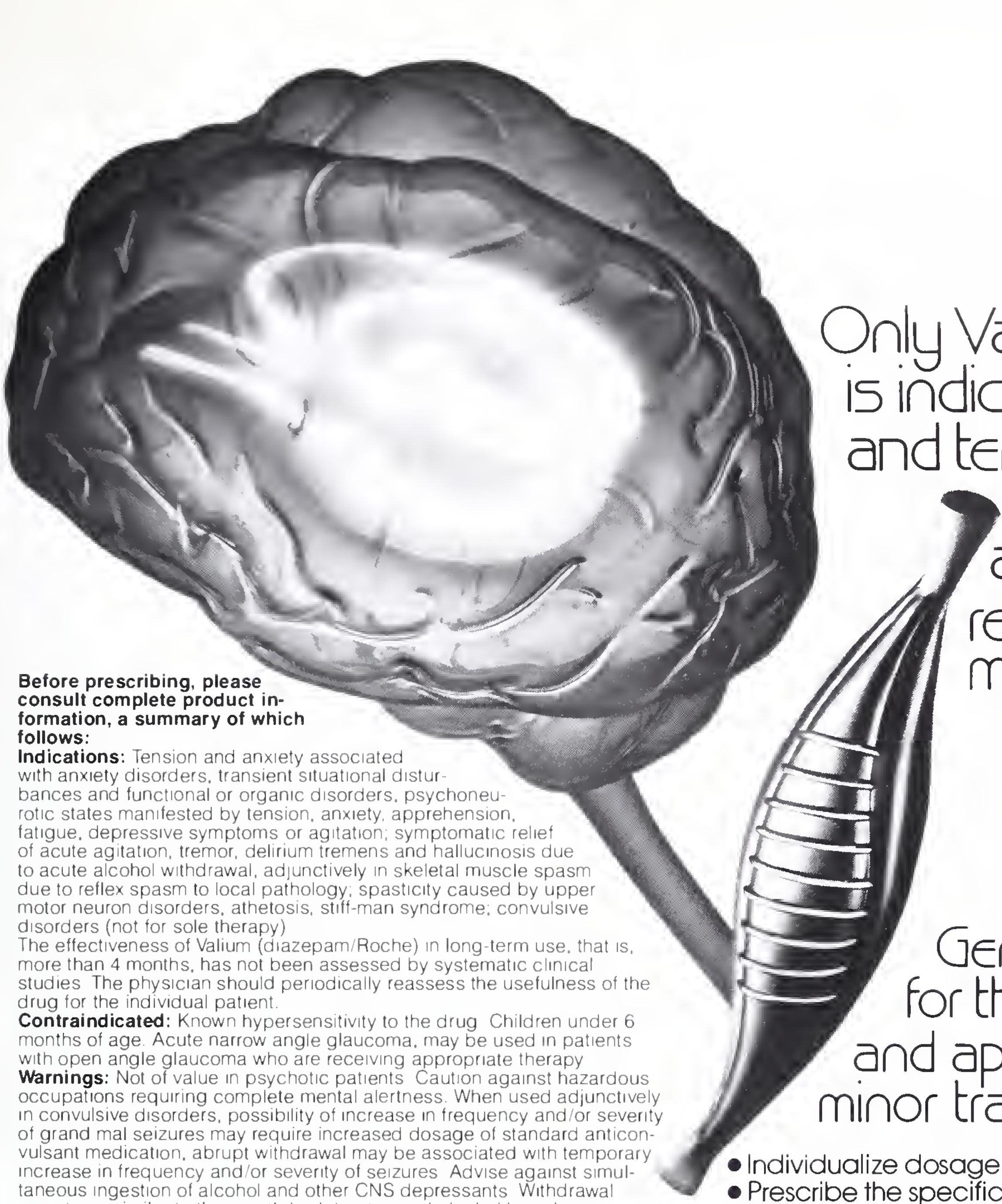
In some cases your doctor may suggest desensitization. After a series of tests to identify the offending allergen, the doctor administers a graded series of injections containing minute amounts of the substance. If the injections are started before the hay fever season begins, it is possible to build up an immunity. If all else fails, you can make a permanent move to a new climate, but other allergies may await you in the new location.

Avoid the cause of your allergy if you can. Have it treated if you can't.

Don't attempt to doctor yourself with non-prescription remedies.

Avoid getting overheated and exhausted. Fatigue can trigger a hay fever attack.

June, 1980
Frank Chappell
Science News Editor
AMA



Only Valium® (diazepam/Roche) is indicated in anxiety and tension states and as an adjunct in the relief of skeletal muscle spasm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety associated with anxiety disorders, transient situational disturbances and functional or organic disorders, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome; convulsive disorders (not for sole therapy)

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy

Warnings: Not of value in psychotic patients Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures Advise against simultaneous ingestion of alcohol and other CNS depressants Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy

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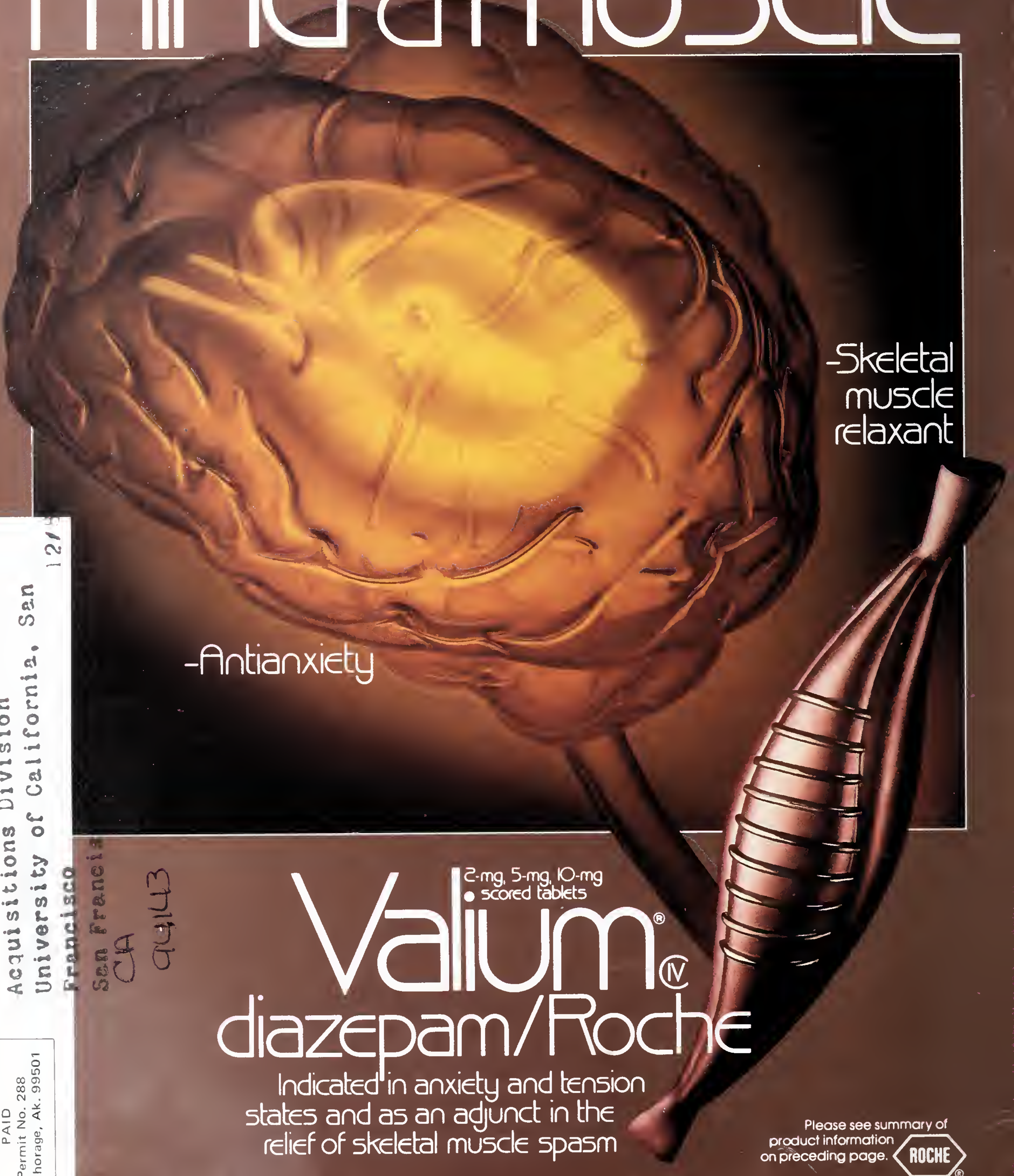

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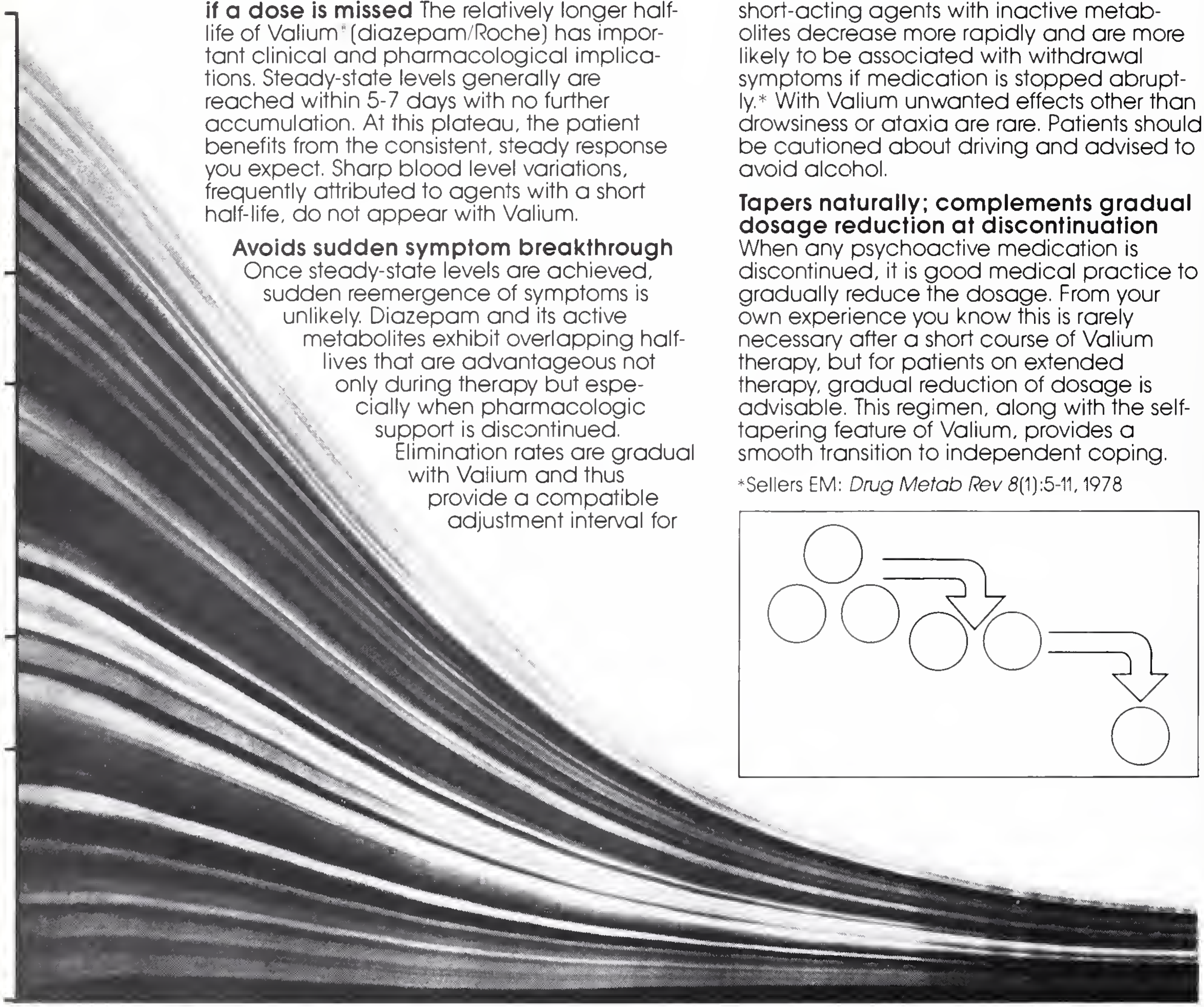

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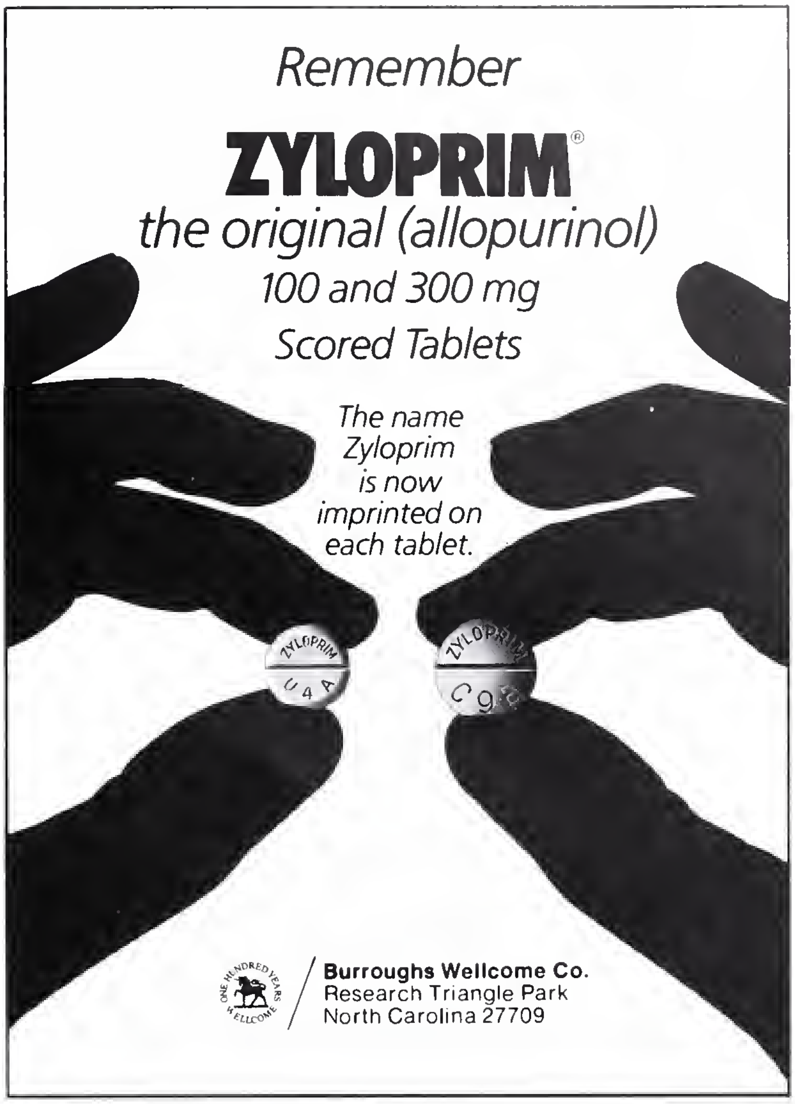
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AN EVALUATION OF APPENDECTOMIES IN THE STATE OF ALASKA

Thomas S. Nighswander, M.D., MPH

Gail M. McGuill, RN, BSN

APPY STUDY

In an effort to study the management of appendectomies in Alaska, the Alaska Professional Review Organization undertook a statewide hospital evaluation of appendectomies. This study followed the guidelines for APRO's Medical Care Evaluation (MCE) Study Program which is one of the health care review tools. Due to the limited size of many of this state's hospital medical staffs and their geographical remoteness, a statewide study program was developed. The purpose was to compare local health care practices with acceptable standards for Alaska. The goal is improvement in patient care. The studies are developed to assure that patients are receiving the highest possible quality of care in a cost effective manner given the local resources. This statewide approach to care studies allows APRO to assist local hospitals and physicians by providing them with information and allowing them to use the information to improve their patient care.

The development of the statewide studies and the analysis of their results involves a peer review process. When hospitals vary from the state averages, they are notified so that their difference can be evaluated by themselves. When possible problems are identified from the studies, the hospital's response hopefully results in improvement in the quality of care delivered.

Methods

The statewide appendectomy study was completed in April 1980. Cases for inclusion in this study were chosen by the following procedure:

Hospitals were asked to identify up to 25 cases of primary appendectomies. Incidental or secondary appendectomy cases were excluded from the sample. They were asked to choose their sample from the period July 1, 1978 to June 30, 1979.

Each chart was reviewed by the hospital Review Coordinator. The following components were examined:

1. Last WBC prior to surgery
2. Operative report
3. Pathology report (for the pathological diagnosis of the appendix)
4. Graphic record of vital signs after the first 48 hours post-op
5. Total length of stay
6. Mortality

This study utilized the staging approach which is based on the severity of objective findings. This method is a more simple and direct way to focus and find possible problems than the conventional process and outcome criteria methods. The staging methodology rates the disease or condition into four categories ranking from normal findings to critical findings. In Stage 1, objective findings are normal and in Stage 2 they are minor. These findings are of minimal consequence. Stage 3 find-

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ings are major and require reversal if a probable untoward patient outcome is to be avoided. In Stage 4, findings are critical and conditions demand more immediate medical response to prevent or minimize the expected harm. Application of this methodology to evaluation was developed and first used by Alan Brewster, M.D. of the Central Massachusetts PSRO.

To better understand the staging concept, the stages used in the current study are noted below.

Each patient in this study was placed in one of the four following stages.

Stage 1	White Blood Count less than 10,000, normal pathology report
Stage 2	White Blood Count greater than 10,000, normal pathology report
Stage 3	Positive Pathology report for acute appendicitis/inflammation without local perforation
Stage 4	Positive Pathology report; any condition listed in Stage 3 with perforation, abscess or generalized peritonitis

This study compares and contrasts stages among various age groups and hospitals.

Participation in this study involved 19 of Alaska's 24 acute care hospitals. Four hospitals had no appendectomy cases to report for inclusion in the study. The remaining hospital had recently completed an appendectomy study in their own facility and consequently did not wish to participate in the group study.

There was a total of 258 patients in the sample. Only one death occurred in the sample population.

Results

For the purposes of this study, the data were grouped by various methods.

In the sample there were 258 patients who were operated on for appendicitis. Forty-three patients (17%) had normal appendices (Stage 1 and Stage 2). Two hundred fifteen patients (83%) had appendicitis noted on the pathology report. Further, 34 patients with complicated appendicitis (Stage 4) accounted for 13% of the sample. There were 20 patients (8.5%) who had white counts below 10,000 and normal pathology reports (Stage 1). These results can be seen in Table 1.

Is there any age group that disproportionately accounts for the majority of the complicated cases of appendicitis? The rank ordering of complicated appendicitis rates are as follows: Fifty-seven percent of those patients 70 years or older had complicated appendicitis. Those in the first decade of life had an 18% complication rate followed by 17% for the 30 - 39 age group and 60 - 69 age group.

Table 1

Statewide Distribution per Stage by Age

Age Group	Stage I (WBC 10,000)	Stage II (WBC 10,000)	Stage III (Positive Path for acute Appendicitis)	Stage IV (Perforation abscess, Peritonitis)	All Stages
0 - 9	1 (3%)	6 (18%)	20 (60%)	6 (18%)	33
10 - 19	14 (14%)	11 (11%)	64 (62%)	13 (13%)	102
20 - 29	3 (5%)	4 (7%)	49 (84%)	3 (5%)	59
30 - 39	2 (9%)	1 (4%)	16 (70%)	4 (17%)	23
40 - 49	0	1 (6%)	15 (83%)	2 (11%)	18
50 - 59	0	0	9 (90%)	1 (10%)	10
60 - 69	0	0	5 (83%)	1 (17%)	6
70 +	0	0	3 (43%)	4 (57%)	7
All Ages	20 (8%)	23 (9%)	181 (70%)	34 (13%)	258

The Stage 1 patients (normal appendix and a white count less than 10,000) were disproportionately represented by the 10 - 19 age group. Stage 1 patients in this age group accounted for 70% of all Stage 1 patients and these 14 patients represented 14% of all the cases for that age group.

Are the stages different for different hospitals? The hospitals were grouped according to the number of discharges per year and compared by stages as seen in Table 2.

Table II

Statewide Patient Distribution per Stage by Hospital Group Size

Hospital Group	#of Discharges per year	Stage I	Stage II	Stage III	Stage IV	All Stages
1	0 - 500	2 (6%)	3 (9%)	25 (78%)	2 (6%)	32 (100%)
2	501 - 1000	0 (0%)	1 (6%)	11 (69%)	4 (25%)	16 (100%)
3	1001 - 2500	9 (6%)	11 (8%)	102 (72%)	20 (14%)	142 (100%)
4	2501 +	9 (13%)	8 (12%)	43 (63%)	8 (12%)	68 (100%)
Totals		20 (8%)	23 (9%)	181 (70%)	34 (13%)	258 (100%)

Fifty-five percent of the cases in this study were in hospitals with 1001 - 2500 discharges. Group 2 hospitals (501 - 1000 discharges) had a 25% complication rate (Stage 4). This is substantially higher than the other groups. The largest hospitals (greater than 2500 discharges) had the highest percentage of patients with normal appendices and white blood counts less than 10,000 (13%).

For further comparison, hospitals were divided into two groups. Those that served as primary care hospitals and those that in addition served as referral hospitals in Table 3.

The referral hospitals had a greater percentage of patients with normal appendices with or without elevated white counts (Stage 1 - 13%; Stage 2 - 14%) and fewer perforations (Stage 4 - 11%). By comparison, primary hospitals had fewer normal appendices (Stage 1 - 4%; Stage 2 - 5%) but more perforations (Stage 4 - 15%).

Table III

Comparison of Primary (P) Care Hospital Group vs. Referral (R) Hospital Group by Stage

	Stage I	Stage II	StageIII	Stage IV	
Group R	15 (13%)	16 (14%)	74 (63%)	13 (11%)	118 (100%)
Group P	5 (4%)	7 (5%)	107 (76%)	21 (15%)	140 (100%)
Totals	20 (8%)	23 (9%)	181 (70%)	34 (13%)	258 (100%)

In an attempt to further analyze the data, hospitals were divided into private and Alaska Native Medical Service Hospitals. The only Alaska Native Medical Service Hospitals with appendicitis were found in Group 3 hospitals (1001 - 2500 discharges). They are compared with similar size hospitals in Table 4.

Table IV

Comparison of Stages in ANMS & Private Hospital with 1000 - 2500 Annual Discharges

	Stage I	Stage II	Stage III	Stage IV	Totals
ANMS	1 (2%)	1 (2%)	41 (77%)	10 (19%)	53
Private	8 (9%)	10 (11%)	61 (69%)	10 (11%)	89

The Alaska Native Medical Services Hospitals have relatively fewer patients with normal appendices (Stage 1 - 2%; Stage 2 - 2%) and more with perforations (Stage 4 - 19%). This is compared to the private group, which had higher rates of normal appendices (Stage 1 - 9%; Stage 2 - 11%) and fewer perforations (Stage 4 - 11%).

We investigated the average length of hospital stays for all cases in the sample. The only interesting differences are found in Group 3 hospitals (1001 - 2500 discharges). These can be seen in Table 5. Hospitals 2 and 7 have substantially higher lengths of stay than the others. (30 days and 26 days respectively). Hospital 7 is notable in that it had the highest percentage of patients in Stage 4 (24%) with a range of length of stay from 14 - 57 days.

Discussion

The staging methodology used in this study and studies elsewhere in the United States have been very useful for comparing hospital data. The data are relatively easy to collect, use objective information and make sense clinically when looking at large volumes of patients. It is useful in looking at the grouped data and not at specific cases. If a clustering of cases falls outside established normative values, it would be useful for this data to be returned to the local hospital allowing them to evaluate their discrepancies on a case by case basis. The staging methodology is a problem finding methodology not a problem solving one.

Table V

Average Length of Stay in Group III Hospitals (1000 - 2500 discharges) with Complicated Appendicitis (Stage IV)

Hospital	# of pts in Stage IV	Total # in Study	Range of Length of Stay Stage IV	ALOS Stage IV
1	1 (11%)	9	2	2
2	1 (7%)	14	30	30
3	2 (8%)	25	9-11	10
4	3 (16%)	19	7-11	9
5	3 (12%)	25	5-8	6
6	4 (16%)	25	3-7	4
7	6 (24%)	25	14-57	26

The current report has obvious limitations. Not all hospitals in the state were included in the study. There is a small number of patients due to the size of our population. In addition, for larger hospitals the sample was limited to only 25 patients. This facilitated managing the data but contributed to small numbers allowing only trends to be suggested. It is useful to comment on several of them.

There are age and hospital differences in the staging results. It was noted that four out of seven patients over 70 years of age had complicated appendicitis. This attests to the difficulty of diagnosing appendicitis in the elderly. However, it was notable that in the sixth decade of life there was only one case (17%) with complications.

This compares very favorably with published data by Owen from Charlotte, North Carolina. He reviewed 68 patients from age 65 - 99 years from January 1964 to July 1976. He found a perforation rate of 73.4%. This perforation rate for the same age group in Alaska was 38%. His results and that of the current study can be seen in Table VI.

Table VI

Comparison by Stages of Age > 60 in Alaska and Charlotte, N.C.

	#of patients	Stage I/II (Normal Append)	Stage III (Appendicitis)	Stage IV (Complicated Appendicitis)
Charlotte, N.C.	68	4 (57%)	14 (20%)	50 (73%)
Alaska	13	0	8 (62%)	5 (38%)

A study from the division of pediatric surgery at Ohio State University allows for a comparison to our state data for the 0 - 18 age group. This can be seen in Table VII. In Columbus they operated on greater numbers of perforated appendices (33% vs. 14% for Alaska) but had one half the percentage of normal appendices (12% - Columbus; 24% - Alaska).

Table VII

Comparison of Stages for Ages 0-18 in Columbus, Ohio & Alaska

	Stage I/II (Normal Append)	Stage III (Appendicitis)	StageIV (Complicated Appendicitis)	Total
Columbus, Ohio	17 (12%)	82 (55%)	49 (33%)	148
Alaska	32 (24%)	84 (62%)	19 (14%)	135

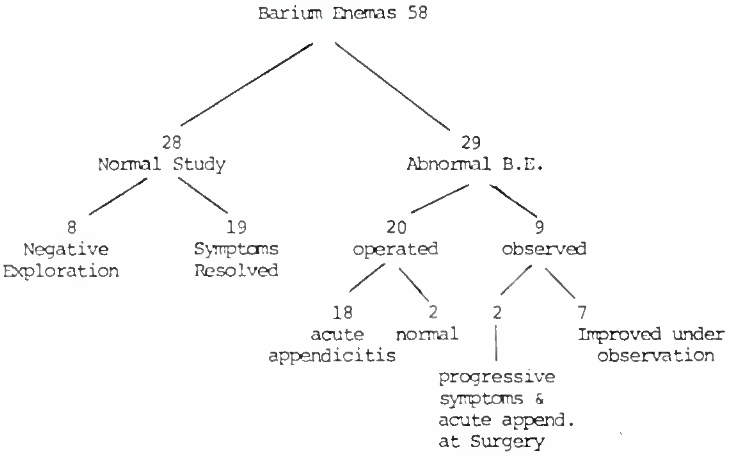
Clearly, it would be to everyone's advantage to have fewer negative laparotomies for suspected appendicitis. Is it possible to reduce the number of negative explorations without waiting too long and thereby increasing the number of cases of complicated appendicitis?

To reduce the number of negative laparotomies, White demonstrated that a period of intensive in-hospital observation of children whose diagnosis was uncertain reduced the incidence of negative appendectomies from 15% to 2% without concomitant change in the incidence of rupture.

An additional management modality is the use of a barium enema. Jona reported on 58 barium enema examinations in children. They maintain that a barium enema of the unprepared colon is a safe and simple procedure which can provide additional useful information. "Complete filling of the appendix in the absence of mucosal or extrinsic compression of the cecum or terminal ileum is a reliable sign of a normal appendix". The results of their study can be seen in Figure 1.

Figure I

Results of 58 Barium Enemas in Children



The barium enema examination is helpful in the evaluation of disease in children with suspected appendicitis but should be used by the responsible surgeon only with a careful history and physical examination and in-hospital observation.

In an ideal world there would be no cases of complicated appendicitis and no normal appendices found at the time of a primary appendectomy.

Realistically, one would like to keep the number of patients at these two extremes at a minimum. The data in this paper should allow local hospitals to make statewide and some national comparisons to help them decide if their suspected cases of appendicitis should be managed differently.

Note: APRO would like to thank the hospitals who cooperated in this effort:

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Cordova Community Hospital
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Ketchikan General Hospital
Kodiak Island Hospital
Kotzebue PHS Hospital
Mt. Edgecumbe Service Unit
Petersburg General Hospital
Seward General Hospital
Sitka Community Hospital
South Peninsula Hospital
Valley Hospital
Valdez Community Hospital
Providence Hospital

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RURAL MEDICINE IN ALASKA: THE VIEW FROM POINT LIONS

Michael H. Emmick, M.D.

This essay is prompted by Dr. Drickey's article "Physical Isolation from Specialty Care: A Problem of Family Practice in Bush Alaska" in the March/April issue of Alaska **Medicine.**[1] Hopefully, it will stimulate further thought and comment regarding the serious problems of medicine in rural Alaska.

Following internship in 1958, fourteen years private practice in Spokane, Washington and one year with the Alaska Native Health Service, Anchorage, I established a private practice in Port Lions on Kodiak Island. Port Lions had no medical facility. Medical service was provided by an itinerant physician from Anchorage once or twice yearly and a community health aide. Otherwise, patients needing medical care traveled to Kodiak city or Anchorage. Hospital care was provided in Kodiak or Anchorage.

Port Lions has a population of 250. It is modern by Alaska village standards and is relatively new. The population consists primarily of Aleuts who were former residents of Afognak until the 1964 earthquake required relocation of their village. The name stems from the sponsorship of the coordination of relocation by Lions International. The situation seemed ideal for a physician who wanted to escape the 70 hour work week.

The first thing necessary for such a move is to convince your colleagues that you are not "nuts." Secondly, you must have a willing spouse and enough money in the bank for a possible 'long vacation'. Fees for professional services are hard to find in rural Alaska. After seven years we are approaching subsistence income level from medical practice. The small population is not the problem. Rather, it is the allocation of funds. Neither federal nor state policies are geared to the unique economic situation that exists in rural Alaska. Money seems to be available for everything medical except the payment of physicians' fees. The greater the distance from medical centers the less services are worth. Obviously, a physician "is nuts" to consider practice in rural Alaska.

Income for physicians in rural Alaska will preclude adequate levels of care until fee formulas are adjusted to reflect the true value of services provided by a resident physician. A realistic fee would be about double what present schedules provide. At this level, there would be an approximate 33% savings in the direct cost of medical care for the rural patient. I have estimated that on Kodiak Island the cost of travel and lodging for patients traveling to medical facilities is greater than the cost of actual out-patient care. A large percentage of the rural medical care dollar subsidizes air carriers and hotel keepers. Many other intangible savings such as early care, emergency services and population security result from the presence of a resident physician. Approximately 10% of our present population would be prevented from living in their home village with their families in the absence of resident physician care. Many of these are senior citizens with chronic severe pathology that would qualify them for Pioneer Homes or nursing home care with the excessive cost of such facilities supported by public funds. Recognition of the true economic value of resident

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1. Drickey, RE: Physical isolation from specialty care: a problem in bush Alaska. **Alaska Medicine**, March/April 1980.

physician services and adequate payment for such services would play a strong role in making rural medical practice more attractive.

The difficulties of isolated practice are well outlined by Dr. Drickey. I can state categorically that without my previous experience in a medical center with high standards of practice and exposure to specialists and sub-specialists I would be unable to practice in a remote setting. The very policy of encouraging the young, inexperienced physician to attempt to practice in isolated areas either urban or rural is self-defeating. Dr. Drickey well recognized the insecurity and inadequacy of an inexperienced physician when dealing with life-threatening situations in an isolated setting. Experienced primary physicians have at least had the benefit of learned controlled emotion and personal fallibility. After adequate exposure to real medicine in any setting the experienced physician finds that "ideal medicine" takes on shadings of realism. Man is fallible; medicine is fallible. We do not have answers to all things. Combine the stress of isolated practice with inadequate compensation, inadequate facilities and excessive demand on time and it is a wonder that any physician would elect to practice in other than a well-equipped medical center where one has the support and security of the 'herd .'

With experience and knowledge gleaned from previous practice, it has been relatively easy to evolve adequate medical facilities for the community. We have a modern clinic developed with local talent that compares favorably with any modern urban family practice facility. There are many sources of funding and support. The essential element is determination to provide an adequate facility and to realize that much of the equipment can not be justified in the usual sense. Operating in an isolated and unique environment, survival justifies cost not utilization. We would be happy if we never needed some of our emergency equipment and supplies. We measure our effectiveness in non-utilization of I.V. fluids and certain emergency drugs. It seems that anticipation of need precludes use of much of our resource. Our under used infirmary is a monument to prevention and home, self and early care. Our infrequent use of hospital represents prevention of exposure of our citizens to a life-threatening environment and is part of our preventive medicine program. Only experience in medical practice can provide comfort in the remote area.

Recent developments in post graduate education pose a rather serious problem. It is ironic that after years of dedication to the post graduate effort and Fellowship in the American Academy of Family Physicians, (mostly as a result of inadequate time for reading and self study while in a busy practice) I find myself in a reversed role. Travel from rural areas for formal post graduate education is expensive and not worth the cost compared to time for reading and self study. However, if I do not meet certain statutory requirements, I am precluded from licensure. At present, this is a negative aspect of locating in rural Alaska.

The fees paid for rural service do not reflect the cost of post graduate training. It is a serious financial problem. Perhaps the elimination of categories of post graduate certification would solve this problem.

The stress of rural practice is probably too great for the young inexperienced physician and his family. I recall one situation while on temporary duty at the Nome Hospital involving a young physician who had been stationed there for approximately six months. He and his young wife had arrived full of great expectations. However, the demand of his profession immediately placed a strain on the marriage and his wife had left on 'vacation' before I arrived. He frankly admitted that he couldn't take it any longer, could not handle the medical problems confronting him and was about to 'flip'. Discussion and rationalization were inadequate solutions to his problems. I frankly advised him that his becoming another Nome casualty would benefit no one and that his own health and future were much more important than the needs of the hospital or community. This physician was impaired. One morning he did not show up for work. Inquiry of those who had last seen him revealed that he had stated that he was going to walk down the Iditarod trail as the race had just been completed. I heard no more from him and have often wondered if he did make the walk.

Medical care standards in Alaska are paradoxical. On the one hand, in metropolitan areas medical care standards are comparable to any similar area in the United States. On the other, rural areas medical care and service is essentially non-existent. Between we see a panorama of medicine as it evolved in the continental United States during the past 80 years. This situation lies in modification of federal and state policies and medical expectations. We need to start where we 'are' and attempt to telescope the time and distance problems into a coherent plan to bring reasonable medical resources to the majority of the population rather than requiring the rural population to travel to medical centers. Present policies are economically wasteful and perpetuate the existing paradox. In general, Alaskan medical policies as practiced by government have been static and bureaucratically oriented. Years ago certain 'empires' were established to meet pressing needs such as the tuberculosis epidemic. The requirements of the 'need' were met and the problem solved. The bureaucratic 'empires' live on without justification or goals.

Complete rethinking and reorientation is required if ever there is to be reasonable medical care expectations in rural Alaska. The 'meat cleaver' approach will probably be necessary. Certainly, those of us who live with the problems on a daily basis have no influence on the system. There is an inadequate population base for significant political influence. The altruistic medical planners and policy formulators are captured by the bureaucracy. Once swallowed up they soon become keepers of the system. One thing is certain if money is involved those in need are the last to get a chance at it. Even attempts to contract with the state for the functions of the public health nurse fall on deaf ears. The allocation of funds budgeted to support resident services would be of great benefit to a provider and would lend encouragement for this development. Requests of this nature are not even seriously considered.

Most of the local population are eligible for Indian Health Service care. We have had generous support for everything but actual professional services. Facilities are nothing without the ability to utilize them and direct them. Until 1980, budget for professional services was static for a period of four years when inflation was rampant in terms of living cost. The Medicare and Medicaid fee schedule is pathetic even though the cost for services triples when not provided locally. At minimum, where travel is involved, the same service provided locally for a $22 fee costs a minimum of $62. Medicare and Medicaid allow $16 for the same service. During the past four years my gross income from medical practice has amounted to approximately $20,000. In the absence of a resident physician, the same services would have cost approximately $50,000. On budget sheets or in total buget numbers funds in excess of 50% are not going for actual care. Rather they are expended on travel and incidentals much of it paid by public funds. Would it not be more prudent to develop a flexible program that would promote medical care at or close to home rather than continue encouraging patient travel?

Considering these factors, one must be 'nuts' to even consider medical practice in rural Alaska EXCEPT THAT:

There are significant rewards for the right person. I feel that there are many physicians who would like to do the same thing that we have done. Bear in mind though that even the 'right person' cannot maintain a compromised life style in rural Alaska without reasonable financial resources. One can get by on a lot less than usual medical income and find rewards in all of the other aspects of rural living. Under present policies a physician will find that it will cost money in addition to current income to live and work in rural Alaska. It would seem prudent at least to create policies that would assure subsistence income by reallocation of current expenditures for medical care for services provided as close to a patient's home as possible.

Actually, when one moves to a restricted rural area such as this, one has already compromised most of the things normally considered important in medical economics. One's expectations are reduced drastically. You trade off the good income for a good life. You forego the trappings of metropolitan society for the time to spend with your family, the time to go hunting and fishing, the time to read, think and write, the time to enjoy the sea and mountains and the time to get to know your patients. The personal reward of working with a small community and making it a better place to live for yourself and your friends cannot be measured in money. These are non-compensible elements of life. It is a form of medical pioneering and all of rural Alaska is open for such medical ventures.

I have traveled much of rural Alaska and have seen much of its potential for living. I have many acquaintances in the medical profession who would like to experience the things we have found in this small village. Rural medicine will never be developed by the bureaucracy attempting to encourage young inexperienced physicians to do the job. The cost will preclude adequate development. Rather, the greatest potential lies in the experienced overworked physician wishing to escape the high pressure atmosphere of modern metropolitan medicine and who has reasonable resources with which he can enter a pioneering medical venture in this last great frontier state. The greatest barrier is the economic marginal medical subsistence.

Every young physician failure in rural Alaska is a step backward in the development of rural medical care. The target physician-provider should be the successful, experienced, mature physician seeking relief from his 60-70 hour week with assurance of adequate time for all of those things in life that money cannot buy. He must be assured of reasonable support for his efforts to change life style and certainly should not be expected to pay for the privilege of meeting the crying medical needs of rural Alaska. There are real human and monetary savings to be realized from a rational approach to the problem.

Summary

1. Physicians who practice in rural Alaska are not 'nuts' just different.
2. Rural population density is not as important as a factor in the provision of resident physician services as is public medical economic policy.
3. The intangible savings of resident medical care through prevention, population security, reduced need for nursing home and pioneer home care far outweigh the actual direct cost of medical services even in a small population.
4. Present policy of promoting the use of young, inexperienced physicians in rural Alaska is self defeating. Rather, the target should be experienced physicians with reduced economic needs who wish to do some of the other 'things in life'.
5. Current post-gradute education licensing requirements do not consider the problems of the rural physician.
6. Federal and state medical economic policies are archaic so far as rural Alaska is concerned and will preclude development of medical resources until there is a complete reevaluation of the actual cost-benefit aspect of rural care.
7. There are other than economic benefits to be derived by physicians practicing in rural Alaska. An atmosphere promoting the pioneer spirit would entice experienced, secure physicians who have such spirit. Unfortunately, even physicians cannot live on 'spirit.'

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Brief Summary

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WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly *Drug Dependence* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*. Tenuate is not recommended for use in children under 12 years of age.

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ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema, *Endocrine*: impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

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ROUTINE SIGMOIDOSCOPY IN ASYMPTOMATIC PATIENTS

Richard F. Buchanan, M.D.

A recent news release from the American Cancer Society announced the results of a revision of suggested measures for routine surveillance for cancer in asymptomatic Americans. It is particularly newsworthy in that for the first time relaxations in previously recommended guidelines were suggested. The hope was that with somewhat more relaxed suggestions credibility would be enhanced, cost consciousness acknowledged and hopefully compliance would be improved with a higher percentage of Americans participating in voluntary mass-screening techniques.

FIGURE 1

Included among the relaxed guidelines was the suggestion that screening for colorectal cancer should include evaluating stool for occult blood, using the Hemoccult slide testing system, on an annual basis in patients over the age of 50, that a digital rectal examination be done annually on both sexes over the age of 40 and that sigmoidoscopy be performed every 3-5 years over the age of 50 after two initial exams one year apart have been done to clear the colon of pre-existing disease. These studies would be done in asymptomatic patients. This is a relaxation of the previous widely disregarded position of the American Cancer Society of recommending routine sigmoidoscopy in all patients over the age of 40 every year.

Colon cancer as a national problem:

The scope of the problem of colorectal cancer in the USA is alarming. Probably because of the cultural aversion to scatalogic references, it is not widely known among the laity that colon cancer is the most common cancer in both men and women with a prediction of 114,000 new cases in 1980. At current rates, 4.5 million Americans now alive

FIGURE 1

Current American Cancer Society recommendations for the early detection of colorectal cancer in asymptomatic persons.

TEST	SEX	AGE	FREQUENCY	PREVIOUS RECOMMENDATION
Sigmoidoscopy	M & F	Over 50	Every 3 - 5 years; after 2 neg. exams 1 year apart	Persons over 40 annually
Stool guaiac slide test	M & F	Over 50	Every year	Persons over 40 annually
Digital rectal examination	M & F	Over 40	Every year	Same

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will die of this disease.

Colorectal cancer is an accessible cancer to discovery with the advent of the guaiac impregnated slide test, the wide availability of sigmoidoscopy and barium enema and the development of total colonoscopy with biopsy and polypectomy potential. All these techniques are easily available to Alaskans, with colonoscopy and polypectomy available in Fairbanks and Anchorage.

The potential value of mass screening efforts is implicit in studies of survival statistics. The 5-year survival in all patients with colorectal cancer is 43%, with localized disease (Dukes A or B) 71% and when discovered in asymptomatic patients 90%. Presently only 42% of patients have Dukes A or B staging at the time of surgery. Screening studies to date have shown a much higher rate of discovery at localized stages (80% vs. 42%) and therefore rather clearly show that efforts in screening of asymptomatic patients are worthy of increased educational efforts to physicians and patients. regardless of cultural reticence.

High risk patients:

Identification of high risk patients would suggest benefits from diligent adherance to suggested screening measures with an earlier beginning age and shorter intervals between exams. Presently known groups more prone to develop colorectal cancer include those with:

1. Ulcerative colitis with disease of the total colon for over seven years.
2. Past history of colonic adenomatous polyps or colon cancer.
3. Past history of genital cancer in females.
4. Family history of colon cancer and various cancer-related polyposis syndromes (familial polyposis, Gardner's syndrome, etc.)
5. The more recently described non-polyp familial colon cancer syndromes of familial site-specific colon carcinoma, gastrocolonic carcinoma, adenocarcinomatosis (family cancer syndrome,) and Muir's sydrome.

Patients in these groups should presumably be informed of the risks and the value of screening for detection of early asymptomatic disease encouraged.

Hemoccult slide screening:

The development of the guaiac impregnated slide (hemoccult) test has improved mass screening efforts at a low cost. In Anchorage, individual cards cost 27¢ apiece with three-slide packs costing 77¢ apiece when bought by the 100. Both are less expensive when bought in bulk. The Alaskan chapter of the American Cancer Society offers slides and interpretation for free with referral to the patient's own physician if positives are encountered.

The optimal slide test requires the patient to prepare two smears a day (from different parts of the stool specimen) during three days while on a high fiber, meat-free diet, with abstinance from vitamin C, aspirin and horseradish. The slide can be mailed to the doctor; false negatives can result when longer than five days elapse after the slide has the specimen on it. False positives are from 0.5 to 2.0%. Generally 1 to 3% of tests on routinely screened populations are positive. One study showed 40% of true positives were from neoplasms (8% cancers and 32% polyps). 75% of cancers found in this manner are Dukes stage A or B.

The low cost and ease of such a technique make mass use reasonable. Use of Hemoccult cards for stool checking with rectal exams during routine physical exams and pap smear checks certainly should be encouraged and the three slide kits made available to patients during routine exams.

Preliminary reports from the University of Minnesota study suggest that positive Hemoccult testing should result in colonoscopic evaluation as the next step since about 1/3 of colon cancers are missed on barium enema with barium enema to follow if the colonoscope is unable to be passed to the cecum. With completion of the study, the true role of colonoscopy in evaluating positive stools in asymptomatic patients will evolve.

Routine sigmoidoscopy:

The largest and oldest study of the value of routine sigmoidoscopic examination in asymptomatic patients has been a prospective study by Gilbertson at the University of Minnesota over a 30 year period utilizing over 20,000 patients. After an initial examination including sigmoidoscopy and barium to identify underlying occult neoplasm, yearly sigmoidoscopic exam was performed on these patients (over 120,000 patient-years). Every lesion, regardless of appearance, was removed. In the study group the numbers of males and females were roughly equal. All were over the age of 45 and the median age was 59. Over this period of time 100 carcinomas in the distal 25 cm of colon would have been expected to occur. 13 were actually found and none of these were more advanced than Dukes A or B. There were no cancer deaths. In addition, there was a reduced rate of death from more proximal cancers. The presumption is that detection of bleeding from more proximal lesions during routine sigmoidoscopy improved survival.

Gilbertson now says that his data support routine sigmoidoscopy probably over the age of 45 in all patients with those patients in the identifiable high risk categories having routine surveillance starting at an earlier age and at shorter intervals. He suggests starting arbitrarily at about the age of 45 since 90% of colon cancers are found in patients of age 50 or older. Presumably, an early start would pick up and rid the colon of premalignant lesions. Current concepts of development of colon cancer support the removal of all adenomatous polyps within reach of the sigmoidoscope since at least some cancers slowly develop from premalignant adenomas. This concept is borne out by Gilbertson's data.

Other data suggest that lower limits in age recommendations may be too restrictive. A study in 1978 of 6104 asymptomatic males from ages 20 to 80 who under went sigmoidoscopy during routine physical examinations showed about a third of the polyps found were in patients under the age of 50 with an average of one polyp found for every 23 patients sigmoidoscoped under the age of 50.

The use of the rigid sigmoidoscope to evaluate complaints of rectal bleeding or changes in bowel habits and to follow patients with prior colorectal polyps or cancers is certainly part of accepted modern medical practice. Encouragement of asymptomatic patients to undergo periodic sigmoidoscopy has been less than popular as a method of health care surveillance. Reasons include embarrassment, cost and discomfort.

Cost of the procedures has been a factor in considering recommendations for widespread use. Current costs of rigid sigmoidoscopy have run $25-$50 each in Alaska. Flexible sigmoidoscopy using an instrument costing several thousand dollars might be expected to run in the $75-$100 range per exam. A fashionable calculation at the time of Gilbertson's earlier report in 1974 was to figure the cost of each life saved using estimated costs for primary treatment and aftercare of patients with cancer of the rectum. These data were then compared with estimated costs for large scale screening using sigmoidoscopy every two years in all patients in America over the age of 50. The calculated additional expense was 1.7¢ for each of the 30,000 lives saved by discovery of premalignant polyps which were removed or localized curable cancers. Seven years later, all medical costs have risen and presumably a similar comparison could still be made. Whether the increased accuracy of flexible sigmoidoscopy will offset the increased expense is still to be evaluated.

Aids in minimizing discomfort include an experienced examiner, use of an adjustable table to enable easier examination of the sigmoid curve from 17-25 cm from the anus and limiting use of bowel preps which cause spasm. Many physicians stop short of a full 25 cm exam if negotiation of the sigmoid curve is too uncomfortable on that occasion, in hopes that the patient will be more likely to have followup studies if the procedure is relatively painless.

Most asymptomatic patients can be persuaded by a physician aware of the merits of the procedure to overlook the 3-5 minutes of embarrassment and mild discomfort every three to five years.

Summary:

In summary, data currently exists supporting routine surveillance in asymptomatic patients with stool Hemoccult testing programs in patients over the age of 40 and sigmoidoscopy perhaps every 2-5 years in patients over the age of 45 as a cost effective and optimal goal for lowering the death rate from colorectal carcinoma in America. Further study will answer questions of intervals between exams, the age at starting routine exams and the question of whether flexible sigmoidoscopy as it becomes more widely available will be more or less cost effective.

The issue of whether Americans can afford the physician time and expense of such a program needs to be dealt with in the context of a comparison with the loss in life, money and physician time of colon cancer diagnosed too late. The question of what physicians should tell their patients as optimal and reasonable has become somewhat clearer and is the real reason for making guideline recommendations.

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REPORT OF
THE ALASKA STATE MEDICAL ASSOCIATION
DELEGATE TO
THE AMERICAN MEDICAL ASSOCIATION 1980

Richard Witt, M.D.

Skepticism is and probably should be the rule when thinking about and dealing with large organizations even when they are apparently supportive of the efforts of people of a persuasion similar to one's own. I had had no previous experience with the AMA, other than sending in my dues when I was suddenly elected to be the Delegate to the AMA for the Alaska State Medical Association. I attended my first meeting of the House of Delegates from July 20-24, 1980 at the Marriott Hotel in Chicago. Also in attendance from Alaska were J. Ray Langdon, M.D., Alternate-Delegate, David Johnson, M.D., President and Martha MacDermaid, Executive Secretary. Prior to going to Chicago I had been somewhat unfavorably impressed by the number of letters, pamphlets and various boondoggles which had arrived in the mail from various candidates for election to offices within the AMA. This feeling of discomfiture continued after my arrival as the electioneering was rather intense. Our single vote from Alaska was wooed with great ardor by both candidates for President-Elect of the AMA. It was only later as the days wore on that some sense of meaning and purpose in all of the hoopla began to emerge.

The first official meeting that I attended was held by Dr. William Y. Rial, Speaker of the House of Delegates and Dr. Harrison L. Rogers, Jr., Vice-Speaker of the House of Delegates. These two men, in a two hour session, made a distinct effort to explain to all newcomers how the House of Delegates operates and how the general meetings are held. They very kindly explained the special procedures of a parlimentary nature and answered the numerous questions that arose. As the meeting progressed, it became very obvious that these two men were the forces that really made the meeting move and accomplish its end. They are to be commended.

For those of you who have never attended such a meeting, I will attempt to explain how things work. It all begins with concern over a problem or issue in some dining room or doctor's lounge in some community in the hinterlands, in our case it could begin in Anchorage, Sitka, Palmer and wherever. There, a problem is discussed and some solution sought. The matter then comes up for discussion at a local medical society meeting and finally reaches the form of a Resolution to be hashed out at the Annual State Medical Association Meeting. Once a Resolution is framed with its whereases and resolves and is approved by the State Medical Association, it is then forwarded to the American Medical Association for action.

Alaska State Medical Association Delegate to the American Medical Association.

This action occurs at the House of Delegates Meeting. Each Resolution is assigned to a reference committee. This year there were eight reference committees. Our Resolutions were distributed to various committees, depending upon the topics of the Resolutions. Each reference committee then studied all of the Resolutions given to them for appraisal. They reviewed the policies of the AMA relative to the Resolutions and studied any reports which had come from the Council of the AMA on these matters in the past. At the meeting of the House of Delegates, lengthy discussions were held in a parlimentary fashion and each Resolution was discussed from the floor by Delegates who were from the states introducing the Resolutions and also other interested Delegates. The pros and cons were debated. Following such hearings, each reference committee then retired to prepare its report and recommendations to the House of Delegates. In the plenary session of the House of Delegates, the chairman of each reference committee gave his report section by section and made recommendations to the House of Delegates who then proceeded to vote on a recommendation or to extract various points or Resolutions from the report for debate and subsequent voting.

For instance, our Resolution which stated the following: Resolved, that the American Medical Association recognizes and acknowledges that (1) a physician owes no duty to serve any third party, public or private, but rather owes duty only to the patient; (2) free and mutual choice between the physician and the patient is essential to satisfactory health care and (3) the physician has no implicit or explicit responsibility to participate in any particular third party payment program. This Resolution was referred to Reference Committee "A". Reference Committee "A" discussed this in their meeting a which I was invited to make comments concerning the basis for this Resolution. Subsequently the Reference Committee recommended to the House of Delegates that in lieu of the Resolution a reaffirmation of current AMA policy be made and stated this policy. It concerns the free choice of physician as the right of every individual and states that an individual may choose a care plan of whichever type he desires. This was not really the intent of our Resolution. In discussion with the California Delegation, their caucus determined that they would rise on the floor and ask for a referral. I was prepared to further debate the matter. When the proper time came, much to our surprise, Dr. Lonnie Bristoe, President-Elect of the Association of Internal Medicine, rose and spoke in oppsition to the Reference Committee's recommendation and urged that the Resolution be referred to the Council of the American Medical Association for study and possible policy imolementation. His motion in this regard was promptly voted in the afirmative by House of Delegates.

Others of our seven Resolutions met similar though different bits of approval. Our Resolution in opposition to Maximum Allowable Relative Value Fee Schedules was incorporated with a Resolution by the Georgia Delegation asking for Congress to amend the current law in an attempt to rectify the inequities that exist in third party reimbursements, including Medicaid and Medicare. According to the geographical distribution of patients and physicians, the report of the Reference Committee went into lengthy detail to define "customary charge" as proposed by the AMA and differed by Medicare and recommended that the Association devote greater emphasis to its legislative and other efforts to assure equitable and realistic levels of reimbursement for physician services under Medicare/Medicaid programs. Concentrated effort should be focused on the repeal of the Economic Index Regulations.

Our other Resolutions met similar fates but were generally applauded by the more conservative of the Delegates, such as those from Louisiana and Georgia, as well as California. All in all, I think that we were heard and are expected to be heard from again.

The more serious business of the House of Delegates concerned debate on the Code of Ethics. This debate has apparently been going on for some two years and reached a climax at this meeting when a new Code of Ethics was proposed by an Ad Hoc Committee which had been working on the matter. By way of background, it is fair to state that the 1957 Code of Ethics, with which we are all familiar and which is published herein, had come under considerable fire by the Federal Trade Commission in reference to several points. The most important one seems to have been the one in which physicians are admonished to deal only with practioners of scientific medicine. The Federal Trade Commission has ruled that this is an unfair restraint of trade preventing chiropractors from dealing with members of the medical profession, such as radiologists.

In addition, in another suit which is being challenged, the Federal Trade Commission has ruled that the Code of Ethics dealing with fee splitting and unfair charges by physicians is, incredibly, contrary to the public interest and amounts to the fixing of prices. Hence the new Code of Ethics obviously predicated on the matter of saving the financial life of the American Medical Association, (the AMA has already spent $2 million in legal fees in defense of these matters and stands to go bankrupt if certain suits are lost) was brought before the House of Delegates, debated and accepted. The 1980 Code of Ethics is also appended for your study and consideration.

It is fair to say that my impression of the handling of important matters which arise at the grass roots, such as our own concerns and Resloutions, receives considerable and proper consideration by the process of the AMA. Our Resolutions are studied by the Reference Committees, are debated by the Delegates, including our own Delegate, in the Reference Committee and are then brought before the House of Delegates and debated and voted upon and can summarily become the policy of the AMA if accepted by the House of Delegates. Each Resolution receives equal consideration. I am impressed that this is a fair working of the democratic process.

Back to the electioneering, as time grew short and as the parties grew more intense and the electioneering became more heated, it was apparent that many, if not all of the candidates, were serious in their attempts to become elected. As we attended caucus meetings, cocktail parties, pool-side luaus and other convival congregations and talked with the candidates, it became obvious that for some strange reason, these men and women really want to be elected to various committees and offices because they feel they have the capability of working at the job and have something to offer to it. They, therefore, actively sought the election to whatever post they were campaigning. Their state or regional organizations were strongly behind each of the candidates. The spur to such zeal and ardor must be the recognized need to be in a position of influence or power but nonetheless I was impressed with the eye-to-eye honesty of the candidates.

Both candidates for the office of President-Elect seemed to be men of superb caliber. Dr. Thomas Ballantine, formerly Chief Neurosurgeon of the Massachusetts General Hospital in Boston and Dr. Daniel Cloud, Internist of Phoenix, Arizona, both answered my questions concerning the PSRO and JCAH in the same fashion; both desiring to make considerable changes in the activities and influences of these organizations for what would be a better situation for the private practice of medicine. Both candidates made a great effort to convince our Delegation that our vote should go to them. When it came time to vote, it was amazing that all three of us had arrived at similar conclusions as to what our vote should be and our candidates generally won their elections. This included Dr.

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Brief Summary

INDICATIONS: For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

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PRECAUTIONS: Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication.
Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

ADVERSE REACTIONS: Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

DOSAGE AND ADMINISTRATION:
1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985,558

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Cloud as President-Elect, though we had great admiration for Dr. Tom Ballantine and expressed this to him.

Finally, I would like to comment that the entire California Delegation was most kind and considerate to all of us. They invited us to their caucus meeting for information purposes, made no attempt to influence us and were generally helpful. The same can be said for the Rocky Mountain group, which includes Arizona, Nevada, Utah and Montana. This group has asked us to join with them in their caucus. On the floor, the Georgia Delegation was also extremely helpful and made kind suggestions and even seconded in an unsolicited manner a motion which I made. Other Delegates, including Louisiana, were very complimentary toward our Resolutions in general and urged us to continue.

The final soiree was probably unequaled in the annals of organized medicine. This was the inauguration of incoming President, Dr. Robert Hunter of Washington. At the reception following, there was food and drink from all sections of the country, a band played contemporary jazz. While Martha MacDermaid, Dave Johnson, J. Ray Langdon and I munched on anything from crab claws to catfish and hush puppies to pineapple spears and swilled anything from Cabernet Sauvignon to beer out of the keg, I noticed the ultimate, which was a dancing lady clothed in a Roman toga. Albeit she was the most appropriate.

In spite of my initial skepticism and my concluding cynicism, I really do recommend that we continue as a State Medical Association to take our case to the House of Delegates and the Board of Trustees of the AMA. It seems to be, to me, what may well be a final bit of real democracy in action.

PRINCIPLES OF MEDICAL ETHICS 1980

Preamble: The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients but also to society, to other health professionals and to self. The following Principles adopted by the American Medical Association are not laws but standards of conduct which define the essentials of honorable behavior for the physician.

I. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.

II. A physician shall deal honestly with patients and colleagues, and strive to expose those physicians deficient in character or competence or who engage in fraud or deception.

III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.

IV. A physician shall respect the rights of patients, of colleagues and of other health professionals and shall safeguard patient confidences within the constraints of the law.

V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues and the public, obtain consultation and use the talents of other health professionals when indicated.

VI. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate and the environment in which to provide medical services.

VII. A physician shall recognize a responsibility to participate in activities contributing to an improved community.

Recommendation

The Ad Hoc Committee on the Principles of Medical Ethics recommends the adoption of these Principles in lieu of Report A of the Judicial Council (I-77); Resolutions 36, 60, 71, 92, 121, 124, 133, 152 and Report II of the Board of Trustees (A-78); Resolutions 12, 13, 24, 49, 53, 70, 88, 99 and 105 (I-78); and Resolution 1 (I-79).

PRINCIPLES OF MEDICAL ETHICS
1957

Preamble

These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions and with the public.

Section 1

The principle objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2

Physicians should strive continually to improve medical knowledge and skill and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3

A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4

The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5

A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6

A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgement and skill or tend to cause a deterioration of the quality of medical care.

Section 7

In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8

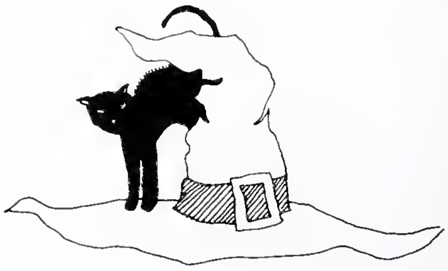
A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9

A physician may not reveal the confidences entrusted to him in the course of medical attendance or the deficiences he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10

The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.



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Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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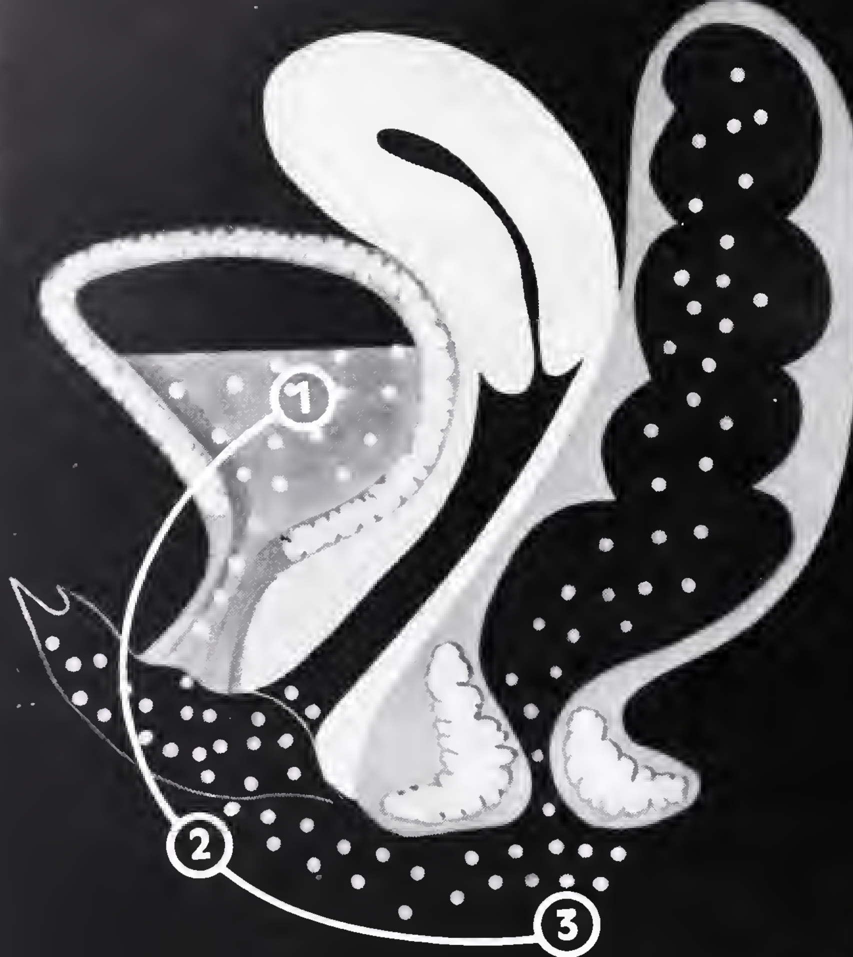

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Please see reverse side for summary of product information.

ALASKA MEDICINE

Volume 22, Number 6

November/December 1980

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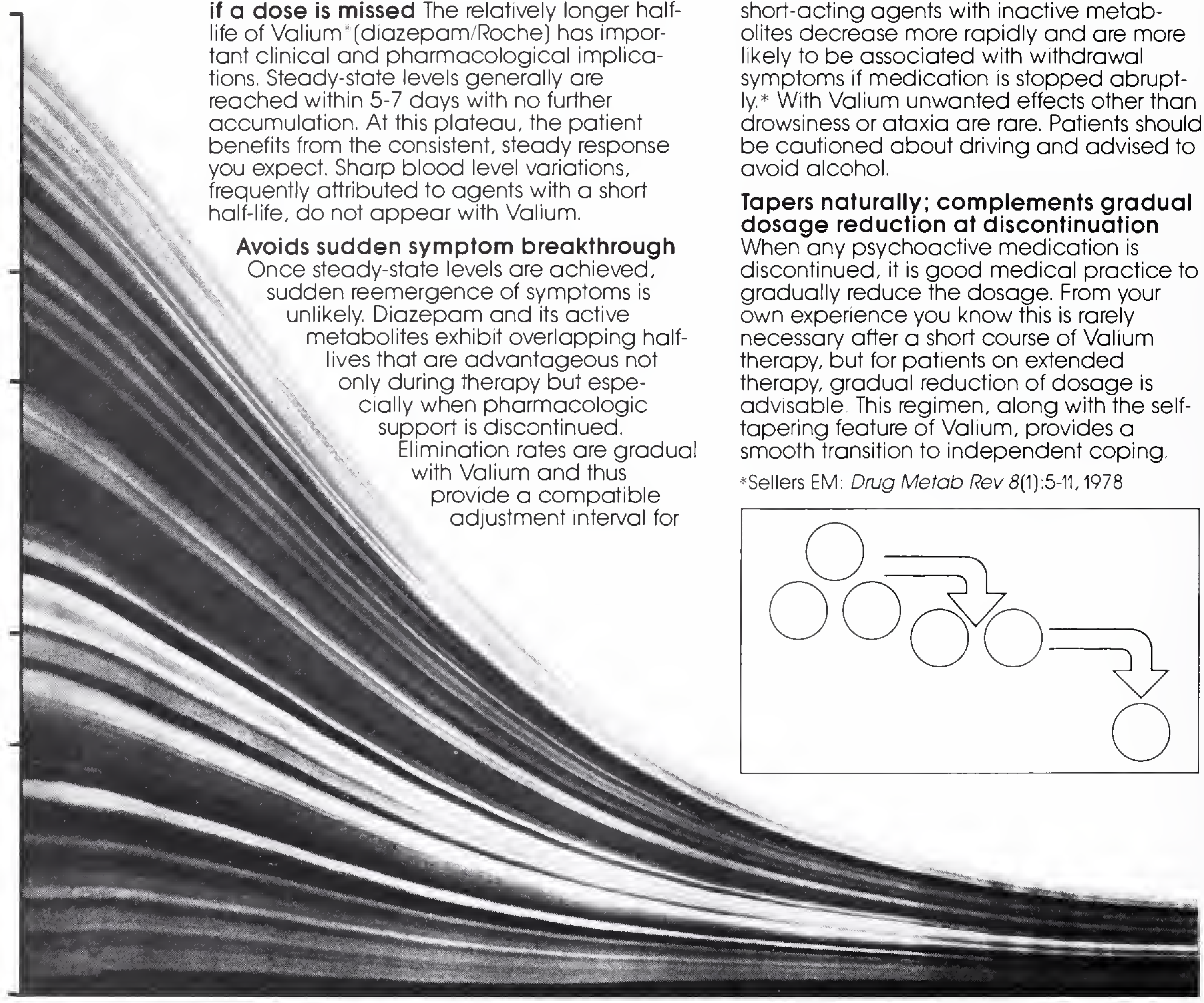

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diazepam/Roche

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effective therapy through efficient pharmacodynamics

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diazepam/Roche

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Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy)
The effectiveness of Valium (diazepam/Roche) in long-term use that is, more than 4 months, has not been assessed by systematic clinical studies The physician should periodically reassess the usefulness of the drug for the individual patient
Contraindicated: Known hypersensitivity to the drug Children under 6 months of age Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy
Warnings: Not of value in psychotic patients Caution against hazardous occupations requiring complete mental alertness When used adjunctively in convulsive disorders possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures Advise against simultaneous ingestion of alcohol and other CNS depressants Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months After extended therapy gradually taper dosage Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants consider carefully pharmacology of agents employed drugs such as phenothiazines narcotics barbiturates, MAO inhibitors and other antidepressants may potentiate its action Usual precautions indicated in patients severely depressed or with latent depression, or with suicidal tendencies Observe usual precautions in impaired renal or hepatic function Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation
Side Effects: Drowsiness confusion, diplopia hypotension, changes in libido nausea fatigue, depression, dysarthria jaundice skin rash, ataxia constipation, headache incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations increased muscle spasticity insomnia rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy

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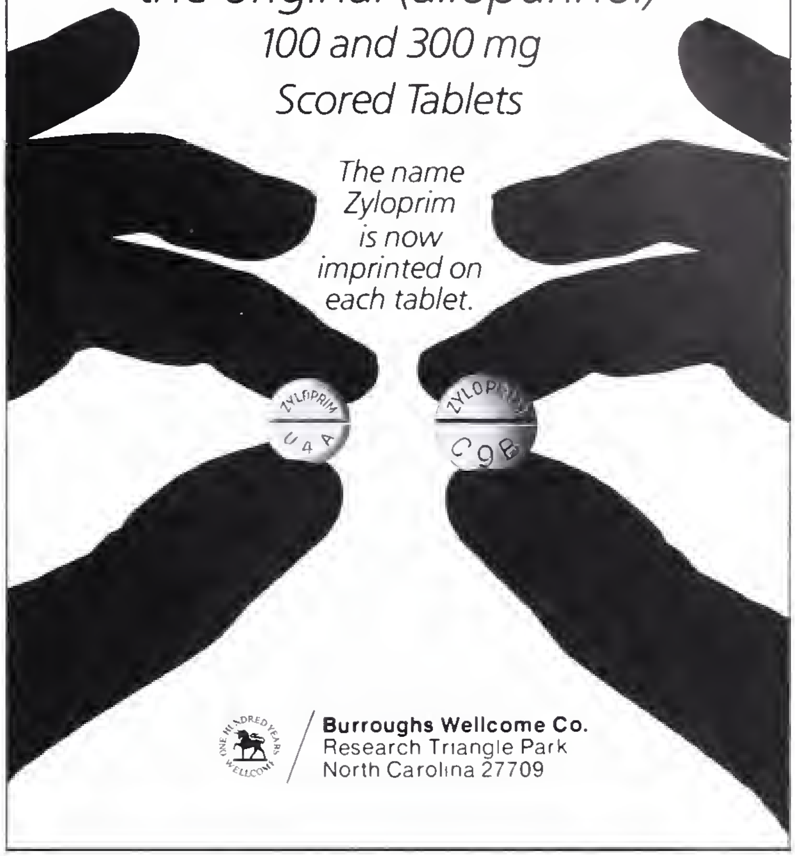

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I am a multiply-handicapped doctor interested in contacting other handicapped physicians in order to obtain some approximation of the size and characteristics of this population in the United States and Canada. There is currently no organization to provide statistical data on the career patterns of such individuals or to what extent various handicaps affect the physician's ability to remain in active practice. Should any physician become handicapped, such information would be of utmost value in determining the feasibility of remaining in any chosen field and would also provide some indication of the career opportunities available to this unique population.

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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Volume 22 November/December Number 6

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About the Cover: *Willow Ptarmigan* by Robert Estus.

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DEVELOPMENT AND MANAGEMENT OF A HEALTH SYSTEM FOR CORRECTIONAL INSTITUTIONS IN ALASKA

Theodore A. Mala, M.D., M.P.H.
Diane N. Emmons, Ed. M.
Curtis Prout, M.D.

Introduction:

With the introduction of the Health Standards by the American Medical Association, a new trend of upgrading jail health care is beginning to affect the nation. Historically, medical care in jails and correctional centers has been minimal, usually reserved for emergency and acute problems, leaving common and chronic problems unattended.

A number of health standards have been written in the last several years including those of the National Sheriffs' Association, the American Correctional Association and the American Public Health Association. Finally, these standards were adopted by the American Correctional Association through the efforts of the Law Enforcement Administration and the American Medical Association. Several states submitted grant applications to the Law Enforcement Assistance Administration to test these standards in the field and to note the resulting changes in the health care delivery system in corrections. The State of Alaska was one of the first in the Nation to receive such a grant.

The standards for health care in jails were written broadly to allow states a certain amount of flexibility in meeting the requirements. Ultimately, there was to be established a facility and system medical accreditation process whereby the A.M.A. would work with the state medical society using the latter as the inspection team. In Alaska, the State Medical Association set up a Committee on Corrections which was mandated to work with the State Division of Corrections for that purpose.

Alaska is unique among the states with a Correctional system spread out over an immense geographical area with many special situations involving urban and rural areas. The total population of the state is slightly over 400,000. The average count of prisoners is approximately 700 within the state, not counting juveniles, and over 100 more at the federal institutions out of state. Access to correctional facilities in Anchorage and Fairbanks is by automobile while the other facilities can only be reached in Anchorage by airplane.

Two facilities in Anchorage were chosen for the Medical Care Demonstration Project. The first was the State Correctional Center Annex facility which is the main receiving facility

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Dr. Mala was the Chief of Health Services for the Alaska State Division of Corrections from September 1, 1978 to September 1, 1979. This study is in partial fulfillment of the degree requirements of Harvard University Graduate School of Public Health, Master of Public Health Program.

The project described in this article was undertaken by Dr. Mala in the Alaska State Division of Corrections in 1978 and completed in 1979.

for pre-sentenced prisoners. The second was the main women's correctional facility, Ridgeview State Correctional Center. The Annex houses approximately eighty prisoners with about nine thousand admissions per year. Ridgeview holds both pre and post-sentenced prisoners totaling about twenty-five with under a thousand new cases per year. As the newly appointed Chief of Health Services for Corrections, my task was to design and implement a system of health services that would meet the A.M.A. jail health standards in these two facilities as well as prepare other facilities medically for accreditation process.

The first step in the Project was to find funds to underwrite the cost of making the necessary changes. A grant proposal was written. A Federal grant for $80,000 plus $20,000 of State Correctional funds was received on October 1, 1978.

The grant proposal became the document which provided a description of the procedures for raising the standards of health care in the correctional system and bringing them into compliance with the American Medical Association Standards. The original grant committed the State of Alaska to adopting and implementing national standards as part of its overall institutional policies for corrections. It was also used to monitor the process of implementing the designed program of change.

Initially, at the Annex and at Ridgeview, it was necessary to describe and assess the existing personnel and facilities and to decide what degree of change would be needed to bring them into compliance with the A.M.A. jail standards. It was hypothesized that if it were possible to attain standards of health care compling with those of the A.M.A. in these two jails, it would be reasonable to assume that the same could be done in other institutions.

By bringing the central receiving facilities at the Annex and Ridgeview into conformity with nationally accepted standards for health and medical services, it was hoped that not only would better services be provided but also that potentially damaging law suits against the state could be prevented. A secondary gain to the community would be the return of former inmates whose health care needs had been met during incarceration.

Under the old system, if a new inmate showed no obvious medical problems, she/he would have to wait until the next sick call to be seen. The booking officer made the initial medical decision as to whether the individual should be taken immediately to the hospital or be required to wait until the next routine sick call. Prescribed medications were administered by the correctional officers. A physician monitored the facility and the work of the Physician Assistant at bi-weekly intervals but only when specifically requested.

Medical records were poorly organized in unlocked cabinets where correctional officers had access to them. The medical record was later added to the booking record once the individual was released. The medical staff had to bring in their own medical instruments. Lack of space to do adequate medical and laboratory work was always a problem. Pharmacy services were provided through the Division's pharmacist who was located nine miles from the intake facilities. Unit dose medications were prepared for the facilities at this source. Dental facilities were also located in the same place.

Implementation:

To implement the program, procedures were developed and initiated to ensure that personnel, facilities and services were organized to provide for adequate health care. In accordance with a timetable (see appendix), the following tasks were accomplished:

1. Guidelines were drafted of medical standards for incorporation in the Division of Corrections Manual. These included dental, pharmacy, detoxification, food and kitchen procedures.

2. Emergency medical and dental plans were developed which include on-call procedures, emergency medical evacuations and use of nearby hospitals and dental clinics for emergencies. By assuring that there is a least one medically trained correctional officer on each shift within the sight and sound of all inmates, medical problems are more quickly identified and treated.

3. Job descriptions were written for medical positions.

4. Registered nurses were hired. Although physicians assistants had been originally specified, it was not possible to recruit them to cover the project on a full time basis. Previously, medical services at both facilities were provided by a physician assistant supervised by one or two military physicians. Historically, it has been impossible to recruit physicians from the local medical community to work in the Anchorage correctional facilities. There are indications that this will change in the future.

The physician assistants provided nightly sick call for both jails as well as for the other area correctional facilities. The physician assistants were employed half-time by the state and full-time in the Armed Services. This was an exception to the rule that military personnel cannot accept positions practicing medicine outside of the military community. However, by negotiations with the military and the state, we were able to acquire the contractual services of one of the military physicians and also to hire three of the military physician assistants who were given special permission by their Base Commander. These were four year college graduates who were certified by the National Physician Assistants Board.

In an effort to recruit the private medical community, we sent letters of invitation to contract for medical services to all physicians listed in the Directory of the Alaska State Medical Association. We worked with the local medical society to attempt to arouse interest in the project. The State Medical Association, while doing no recruiting, appointed a committee to review standards and the process of medical accreditation for the jails.

The same method of recruitment was used with the Alaska State Dental Association but the response was clearly different. The offers from dentists from the private sector to work in our Correctional Centers was so overwhelming that we had to hold a lottery to select who would receive the annual contract award for services. Recruitment for physician assistants and for registered nurses was done through newspaper announcements and through the utilization of the State Civil Service register.

5. The newly hired medical staff then participated in a complete program of orientation to Department of Corrections regulations, treatment programs, emergency care and guidelines for the management of health care in the correctional system.

6. New inmates underwent screening and physical examinations by the medical staff, within 72 hours of commitment and before being placed with the other inmates. Part of the physical examination was a R.P.R. and a tine test. If the tuberculin screening test was positive, she/he received a chest x-ray at the Public Health Department.

Formal sick call was conducted five days a week and the "drunk tank" was checked several times daily.

A unit dose drug distribution system was devised utilizing the facilities of the Eagle River State Correctional Center. Prescribed drugs were delivered to jails daily in a locked container with each medication individually packaged and labeled with instructions as to the time of administration. This is an important and necessary precautionary measure because of the common practice by inmates of substitutions, manipulation and subterfuge to obtain drugs. Control drugs were administered in liquid form when possible to prevent abuse. This system of preventive medical maintenance has greatly benefited the prisoner as well as the state.

7. Old medical records were reviewed, updated and transferred to the new A.M.A. medical forms. If the inmate was transferred, the record was routinely sent with her/him. To maintain confidentiality, medical records were secured and shown only to health care personnel.

8. Work began on developing dental care standards for future adoption.

9. Educational programs were developed to provide for the medical staff to teach correctional officers receiving screening procedures, cardiopulmonary and other emergency training also prisoners are given health education in preventative measures.

10. Provision was made to ensure that each inmate could have one hour of exercise away from the cell and her/his bathing and other personal needs were met.

11. State laws require that all inmates and other persons working in the food area be free from diarrhea, skin infections and illnesses transmissible through food and utensils. In addition they are required to wash their hands upon reporting for duty and after using toilet facilities. Special medical diets were provided for the inmates when ordered by the institutional physician. To qualify for employment in the kitchen area, an inmate was given a physical examination as well as a tuberculin skin test. If the results of both were normal, the individual was approved by the jail physician to work in the kitchen area.

12. Statistical data is being collected on various illnesses treated with the object of identifying potential patterns of morbidity among this enclosed population.

13. Finally, the search for future funding of the program was begun.

Procedures:

The new medical manual procedures for the Division addressed not only strictly medical concerns but also the obligations of the medical staff towards the Institution's security and operating policies. Those same procedures also addressed the staff's right to protection and confidentiality.

Various procedures were written out, to be signed by the supervising physician after being carried out by a nurse or physician assistant.

Examples:

1. Standing orders for stock medications to be distributed by the nurse or physician assistant (such as aspirin, cold pills, antacids

and aspirin substitutes, eg. Tylenol).

2. Certain other procedures, such as initiating alcohol detoxification procedures when indicated on incoming prisoners, are being implemented.

Each facility is now the medical responsibility of one particular physician, referred to in the medical manual as the "responsible physician". She/he is ultimately responsible for the health care of the prisoner.

Prisoner handbooks are published listing the individual's rights and responsibilities and the procedures for obtaining medical care are clearly spelled out.

First-aid equipment has been made both more complete and accessible.

Where standards could not be met, they were still retained as an ultimate goal. An example of this is in the area of dental care. Some areas of Alaska have no dentist for the community at large which leaves little or no time for the jail facility when a dentist does come to town.

The Corrections Medical Manual states that individual medical treatment procedures must be put on the patient's chart in writing so that the medical staff as well as the correctional officers will be informed of special needs.

In larger facilities, a "cardex" system has been developed allowing correctional officers the opportunity to review special considerations for all prisoners under medical staff care. This system allows the medical staff to supply the correctional officer with the information that he "needs to know" rather than the complete medical record.

The individual information card includes the prisoner's name, age, date of birth, identification number, medical problems currently being treated as well as medical information which may limit her/his physical activity during the period of incarceration. Special diets are included on the card, as well as special daily therapies (eg. daily bandage change).

Discussion:

Success is measured in many ways. To the health professional, the reduction of morbidity and mortality brings a certain amount of satisfaction. These efforts are not always measured in terms of complete success by some administrators unless there is some evidence of "cost effectiveness".

To that end, a number of projections were made based on the hiring of three full time registered nurses. These nurses screened all incoming Anchorage prisoners (both male and female, including city, state and federal prisoners). This took the task of medical screening out of the hands of the booking officer and placed the medical judgement where it should have been in the first place with the medical staff. The calculations were based on a twelve month period.

There are about 9,000 bookings per year at the Annex facility.

Table 1 reflects the following information:

"Transportation Savings" refers to the additional hourly wages that an inmate costs the state as a result of the law requiring that a correctional officer accompany the individual to her/his medical appointments. By having on-site medical staff, numerous trips to outside physicians are saved. The average Annex prisoner count is eighty prisoners that of Ridgeview (women) is twenty-five. About ten visits outside per week were saved.

Table 1

Savings Area	Projected Annual Savings*
Transportation	10,431.20
Consultations (medical)	8,500.00
Physical Therapy	11,136.00
Nursing Services On-Site vs. Extended Hospitalization	36,540.00
Extended Stay	2,332.00
Call Back	23,660.00
Early Symptom Recognition	16,440.00
Medication Distribution	17,865.12
Total Saved (Total Projection)	$132,634.32
Less deductions for salaries (registered nurses)	67,608.00
Projected Savings**	65,062.00

* taken from Fiscal Year 1979 data

** reflects the projected total three months before the end of the fiscal year. The actual total will probably be higher, as the figures are conservative.

Brief description of the method used to calculate projection data:

Transportation: number of inmates previously transported per week out of the jail facility for the purpose of laboratory tests multiplied by the hourly wage of the transporting correctional officer using an average of 2.5 hours of transportation time per prisoner.

Consultation savings: using the same number of inmates transported per week to special medical appointments, usually around 10 per week, times $25.00 per visit, a conservative consultation fee.

Physical therapy savings: based on the past year's figures, five inmates per year were sent out of the facility to receive some kind of physical therapy one to four times a day, total days numbering from 2 weeks to 6 months. Using an average of 2.5 hours per trip, twice a day, total of $1000.00 per month. Add to this the correctional officer's time ($12.27/hour) times 5 inmates per year.

Nursing service savings: using the number of reductions of hopitalizations per year, 16 for the Annex; 2 for Ridgeview, because of the supervised on-site care the registered nurses now provide. Daily room charge ($190.00) multiplied by 5 days, average length of hospitalization, times 18, total number of hospitalization reductions, resulted in savings of actual hospital costs.

Annex transfers: Actual number (2) of prisoners transferred to the Annex facility for nursing care instead of sending them to the hospital. Cost of 5 day hospitalization plus daily guard service.

Decreased M.D. - P.A. call back hours: On site registered nurses eliminated call back visits to the jail from seven times per week to twice per week. Telephone consultations now resolve many of the problems.

Early identification: By providing early on-site diagnosis, it is felt that 15 individuals have been treated early and have avoided hospitalization because of such early treatment eg. chronic asthma treated before becoming so ill as to require hospitalization.

Medication savings: Correctional officer hours saved, 4 hours per day, in passing medications out to all prisoners, now done by nurses.

Consultation refers to the average out of facility local medical consultation from the community. Physical therapy savings reflect the P.T. that was done in the facility by the nurses rather than outside. Nursing service savings reflects the dollars spent in place of hospitalization. Previously a prisoner who needed special nursing care was left in the hospital for a longer period of time than others with the same disease so that she/he could derive the full benefits of nursing care unavailable at the jail. Extended stay refers to prisoner patients sentenced and due to be moved from the pre-sentenced facility but held over so that nursing care could be completed before being transferred.

Call back refers to the dollars saved by eliminating most of the physician assistant call-back time by having the nursing service on the spot. The nurses work closely with the physician assistant and have immediate access to both the physician assistant and the responsible physician. Early symptom recognition reflects the decreased costs of extensive hospital stays and guard time expenses.

Finally, medication distribution refers to the amount of correctional officer hours saved by having nurses distribute medications in the institution. This amount alone is estimated to be four hours per day.

The final total of projected savings reflects an estimate of what we feel was saved through the initiation of the Medical Care Demonstration Project. It is clear to us that it has been cost effective to retain the three registered nurses at the pre-sentence and receiving facilities. While cutting costs, the new system has raised the standards of our medical care delivery system to meet the A.M.A.'s standards for jails.

As previously mentioned, the Division of Corrections provides its own medical staff. The role of the Division of Public Health, both Divisions are under the same Commissioner of Health and Social Services, is to provide correctional institutions with supplies from tuberculin and venereal disease screening as well as to follow-up on active cases. One advantage of this is that Public Health, by reviewing the jail census, can find tuberculosis cases previously "lost to follow-up".

Confidentiality is one of the main problems in any system of corrections. Our correctional officers at present have access to the medical records because of a supposed "need to know". This is an area that needs more definition. Medical files should be separated from the prisoner's correctional record to the extent permitted by the law.

Mental illness has always been a "gray" area in corrections. For the mentally ill patient to be housed in a small jail where she/he cannot be separated easily is an area of great administrative concern. The Division of Mental Health, also under the same Commissioner of Health and Social Service, will only accept a prisoner who is legally "psychotic and dangerous". This definition has been, at times, narrowed easily in its interpretation to allow only for a few to be treated in state mental facilities.

The role of Preventive Medicine in Corrections holds some exciting avenues of potential. Many individuals are received into our facilities unkempt with little or no previous attention to their personal medical or dental needs. One of the immediate requests from many individuals in the system is to "see the dentist" as soom as possible. The Division is considering the possibility of hiring a dental hygenist to work under supervision of our contract dentists to screen all individuals in our care and to clean their teeth as well as give them instruction in dental hygiene.

The A.M.A. standards on Health Care for

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Jails are but the first in a series. Other areas where standards are being developed include: mental health, juvenile offenders, dental procedures and provisions for different sized institutions such as prisons and correctional centers. The American Correctional Health Association is also active in this area. Standards and accreditations promise a great furture for Correctional Health both in the areas of legislation and as a basis for federal funding. The quicker the quality of health care in correctional facilities is up graded, the sooner society will benefit.

Acknowledgements:

Special mention should be given to Dr. Helen D. Beirne, Commissioner of the Alaska Department of Health and Social Services, Charles F. Campbell, Director of the Alaska Division of Corrections (D.O.C.) and William H. Huston, former D.O.C. Director, for their roles in initiating and supporting this Medical Care Project on a statewide basis.

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PROGRAM:	**PEDIATRIC UPDATE — 1981**
SPONSOR:	Department of Pediatrics Long Island Jewish-Hillside Medical Center New Hyde Park, N.Y.
LOCATION:	Marbella, Spain, on the Coasta del Sol
DATES:	February 28 - March 8, 1981
CREDITS:	20 credits AMA, Category 1 20 credits LCCME
FACULTY:	International faculty includes: Professor Victor Dubowitz, London, England Professor John O. Forfar, Edinburgh, Scotland Professor Walter H. Hitzing, Zurich, Switzerland Professor Ettore Rossi, Bern, Switzerland Professor R. Zetterstrom, Stockholm, Sweden
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HEPATO-VENO-OCCLUSIVE DISEASE:

CASE REPORT

William H. Bowers, M.D., F.A.C.P.

Hepato-veno-obstructive disease ranges from microstructural veno-occlusive disease to Budd-Chiari Syndrome, the latter a different pathologic entity from the former. Both are uncommon but life threating disorders.

Hepato-veno-occlusive disease is a disorder caused by hepatotoxins in Senecio seeds contaminating flour used for baking bread. It was first recognized by Willmot and Robertson.[8] Bras and McLean first applied the term veno-occlusive disease in studies of patients drinking Jamaican bush tea. The obstructive venous disease differs from Budd-Chiari Sydrome in that small intrahepatic veins are involved without thrombus formation.

A variety of chemicals and plants associated with the disease includes Crotolaria, Senecio, Heliotropium, Cynoglossum, arsphenaramine, urethane, 6-thioguanine, cytosine arabinoside, therapy with ionizing radiation and birth control pills. The most studied toxins are pyrrolizidine alkaloids found in specific plants. Distribution of these plants is world-wide and causes many deaths in grazing livestock.

The following case typlifies the rare disorder.

A 60 year old Korean born male cook presented with anorexia, epigastric pain, twenty pound weight loss, nausea, drenching night sweats, light-headedness and dark bowel movements. Ethanol ingestion had been quite heavy in the past but no history of herbal tea ingestion was elicited. The patient had eaten large amounts of raw fish in the Orient but had been on an American diet during his two years' residence. No family history of illness was noted. No previous injuries, illnesses or hospitalizations were recorded.

Physical examination revealed normal vital signs in a wasted 60 year old Korean male without jaundice. Small anterior freely movable cervical nodes and bilateral carotid bruits were present. The chest was unremarkable except for a grade 2/6 systolic ejection murmur over the left sternal border. Examination of abdomen disclosed normal liver and spleen. Rectal revealed hemoccult negative stool and extremities were unremarkable. Neurologic examination was grossly physiologic.

Laboratory studies were white cell count of 5,400 with 67% lymphs; hemoglobin, 13.5 gm; hematocrit, 40.4%; platelets 240,000; protime, 100%, PTT and bleeding time, normal; SGPT, 36, (0-45); SGOT, 70, (10-40); LAP, bilirubin, alkaline phosphatase, normal; alpha-fetoprotein, negative; CEA, less than 2; serum amylase, normal and urinalysis, normal. X-ray studies included a normal liver/spleen scan, bone scan, barium enema, CT scan of pancreas and an upper GI series showing gastritis confirmed by endoscopy. Antibody to hepatitis B was positive. Serum ceruloplasmin was normal and heavy metal screen in serum and urine was unremarkable. Immunoelectrophoresis was normal. PPD was negative as were serum fungal titers. A bone marrow aspirate showed hyperplastic changes without evidence of malignancy.

An extensive work up for occult malignancy disclosed no disease. The patient improved somewhat and was discharged to return with intense headaches, nausea, vomiting and increased pedal edema. Thorough neurologic evaluation was unremarkable and CT scan of head was normal.

William H. Bowers, M.D., F.A.C.P., Department of Medicine, Providence Hospital, Anchorage, Alaska 99504.

After one and one half months of further weight loss, nausea epigastric pain and slightly abnormal liver function tests readmission was prompted. Fear of occult malignancy led to laparotomy which disclosed normal abdominal contents. Wedge liver biopsy gave microscopic evidence of veno-occlusive disease as noted in figures 1-3.

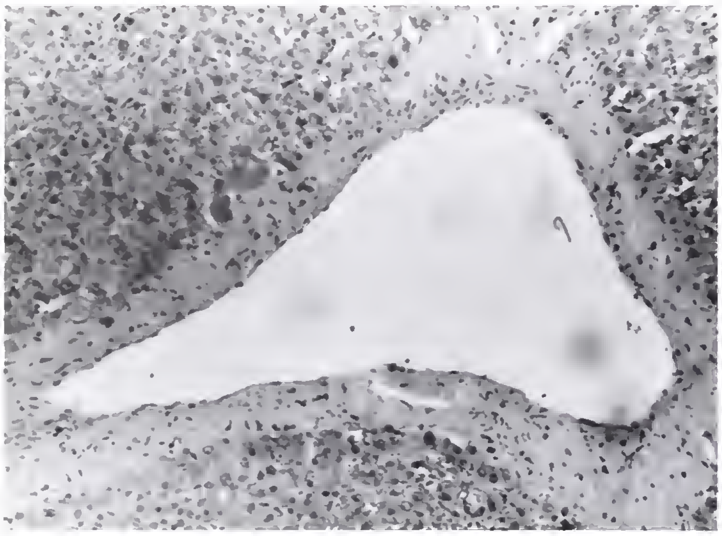

Figure 1: Hepato-veno-occlusive disease H & E stain. High power view (X40) demonstrating thickened disorganized venular walls that eventually collapse and occlude blood flow.

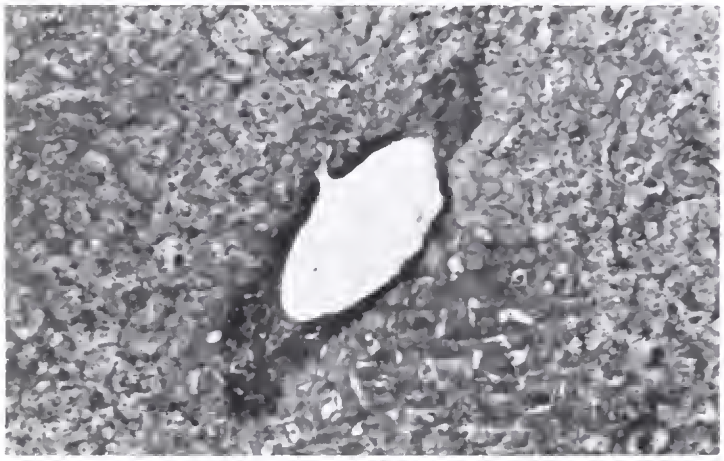

Figure 2: Trichrome stain of hepato-veno-occlusive disease in early stages. Notice irregular thickening and partial lumen occlusion. (X40).

Attempts at enteral alimentation could not compensate for the continued weight loss. Inanition continued despite hyperalimentation until one half body mass was lost. Arrhythmias and congestive heart failure heralded terminal events six months from onset of disease. Post mortem examination was denied by the family on religious grounds.

The case was not only perplexing but unusual as no etiologic agent for hepato-veno-occlusive disease could be demonstrated.

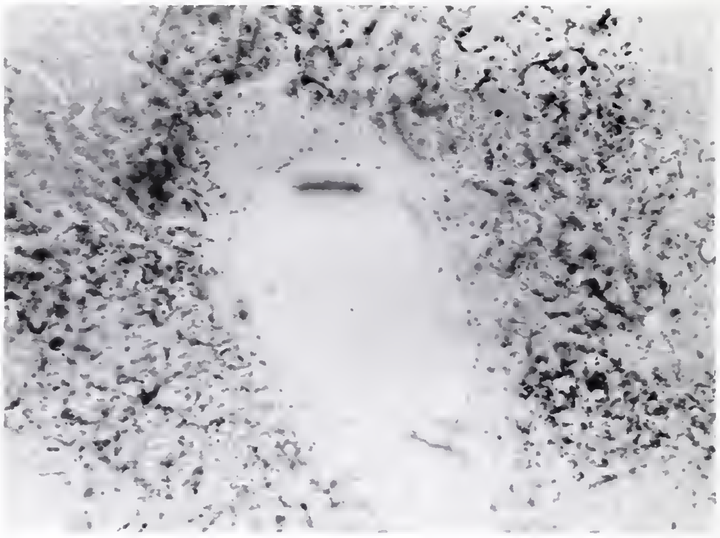

Figure 3: Iron stain of hepato-veno-occlusive disease displaying intensive hemorrhage as red blood cells extravasate in Disse's space. (X40).

Discussion

Hepato-veno-occlusive disease is a relatively uncommon disease occurring in Jamaica, Africa, Afghanistan, Central Asia and only reported several times in Mexican-Americas drinking gordolobo yerba herbal tea folk remedy.[2 1] The disease may be acute or sub-acute leading to cirrhosis if the patient survives.

Case reports of veno-occlusive disease have been cited in patients treated with 6-thioguanine and cytosine arabinoside. Older treatment with urethane and ionizing radiation have caused the disease. Approximately six cases associated with birth control pills have been cited.[1] Probably most noteworthy is the outbreak in Afghanistan where flour was contaminated with Senecio seeds and protein deficiency enhanced pyrrolizidine toxicity. Jamacian bush tea probably accounts for most reported cases in our continent.

Even though pyrrolizidine toxicity was first recognized sixty years ago in South Africa, the occurrence of veno-occlusive disease was not noted until recently.

The Budd-Chiari Syndrome on the other hand involves hepatic vein obstruction from the efferent veins of hepatic lobules to the right atrium. A similar clinical picture may be presented with right sided heart failure or pericarditis necessitating the importance of differentiation from a therapeutic standpoint. The symptoms are few: hepatomegaly, ascites, abdominal pain and vomiting.

Several differing processes contribute to Budd-Chiari syndrome: clotting abnormalities, primary or secondary polycythemia, paroxysmal nocturnal hemoglobinuria, birth control pills, pregnancy trauma to the abdomen, inferior vena cava obstruction in malignant diseases such as renal or adrenal cell carcinoma, hepatoma, metastatic testicular tumors and rarely lieomyosarcoma of hepatic veins. Occassional aspergillus in hepatic veins of leukemics may cause obstruction. Congenital membraneous obstruction at the entrance of left and middle hepatic veins into IVC can be found in Orientals and complete fibrous occlusion of major hepatic veins can be found in Egyptians or in the childhood form of Budd-Chiari. The syndrome can be caused by: webs in the IVC as a result of visceral thrombophlebitis migrans; sclerosing hyaline necrosis or alcohol involving hepatic veins and hepatic abscess or cyst.

Pathologically in Budd-Chiari Syndrome depending upon the cause, one sees thromboses in veins that may be infected or contain malignant cells. Vein walls are thickened in chronic cases with recanalized thrombi. The liver is congested.

Liver histology of veno-occlusive disease is unusual in having no thrombi in the small veins affected and sparing of portal areas. Central areas display intensive hemorrhagic necrosis with extravasation of red blood cells in Disse's space and dilatation of bile canaliculi. There may be massive parenchymal cell necrosis acutely. Central and sublobular endophlebitis causing occlusion of small veins has been thought due to stimulation and contraction of the endothelial venular smooth muscle rendered bare by the toxic process.[6] Fibrillar material adds to the thickened disorganized walls that collapse and occlude blood flow.

Histologically in Budd-Chiari Syndrome, one finds centrizonal sinusoidal distension, congestion and hemorrhage with Disse's space engorged by red blood cells while periportal areas are spared. Centrizonal fibrosis may occur later if the patient survives.

Clinical presentation of veno-occlusive disease is pain in the right upper quadrant or epigastrium accompanied by nausea, anorexia, lassitude and weight loss. There is no fever and only rarely jaundice as increasing abdominal distension with ascites heralds the advanced stages. Liver function tests are minimally disordered as emaciation continues while pedal edema, spider nevi and hepatomegaly with sharp margins develops. In 10% of cases the liver is not palpable. Bleeding abnormalities do not seem to occur but bone marrow is hypercellular. Death occurs three to nine months after onset by infection or inanition. A few may survive only to succumb to the sequela of cirrhosis. Unfortunately no therapy is available except withdrawl of toxins.

Clinically besides hepatomegaly, ascites with increased protein content as opposed to the cirrhotic with low protein, pain and vomiting, one may find peripheral edema with stasis ulcers or occasional watery diarrhea in Budd-Chiari. As the spleen enlarges there is a negative hepato-jugular reflex. The alkaline phosphatase, SGOT and SGPT are increased with a prolonged prothrombin time. There is decreased serum albumin with bilirubin about 2 mg. %. A large purple liver is appreciated at laparoscopy. Astute intrepretation of liver biopsy specimens may help in the diagnosis. Vena cava catherization and angiography are helpful in diagnosis. The technicium 99 sulphur colloid liver scan frequently is a useful noninvasive test showing central uptake of radiocolloid in the caudate lobe with reduced uptake in the right lobe on the anteroposterior view.

Prognosis is poor although heterotopic liver transplatation may offer hope in selected cases. Treatment is primarily that of the underlying disease.

Conclusion

Two distinct pathologic hepato-veno-obstructive diseases exist: one affecting venular walls without thrombus formation; the other affecting the efferent veins of hepatic lobules to the right atrium initiated by intraluminal obstruction.

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BLIND NASOTRACHEAL INTUBATION MADE EASIER FOR THE INEXPERIENCED

L.H. Chandler, Jr., M.D.

Intubation many times is necessary in stressful, life-saving situations. Expertise in this area is difficult to obtain because most of us are not placed in a position of having to intubate a patient. This paper is written with the intent of helping those who are inexperienced in this area to successfully intubate an awake patient.

I learned this "trick" of nasotracheal intubation from my old Chief of Staff, Dr. Gayle Dryden, at Marion Country General Hospital, Indiana University, and feel it would be useful and easily understood by all of my colleagues here in Alaska. Each of us may have need of this in some remote hospital situation in Alaska.

STEPS:

1. Choose an endotracheal tube size at least as small as the diameter of the last joint of the little finger of the patient.
2. Anesthetize the nasal passage way with any topical anesthetic agent available to which the patient is not allergic.
3. Lubricate the endotracheal tube generously with some water-soluable lubricant: 1% xylocaine jelly is quite satisfactory.
4. Introduce the endotracheal tube through the nose into the naso-pharyngeal area and again spray the throat, this time through the endotracheal tube, with topical anesthetic. The patient should cough thus indicating the agent is being placed appropriately on the vocal cords and epiglotic area.
5. Choose a suction catheter that will pass freely through the endotracheal tube.
6. Lubricate the suction catherter rather freely with the lubricant previously used on the endotracheal tube.
7. Introduce the suction catherter through the endotracheal tube as though to suction the patient. As the catheter is introduced, the patient should cough indicating the catheter is in the trachea. Now, slide the endotracheal tube deeper into the nose and using the catherter as a guide into the trachea. Be as gentle as possible. The patient will cough again. Put local anesthetic agent through the endotracheal tube to lessen the irritation.

Voila! You have just intubated your first patient - you have no broken teeth, haven't visualized any vocal cords or even used a laryngoscope.

This procedure is particularly helpful in burn patients who have head and neck burns and can cooperate. A sitting position is the ideal way to do this intubation and many times patients who have airway problems want to remain in this position.

After intubation, airway management becomes much easier. If necessary, tracheostomy may now be done under more stable conditions. I wish the best to those who may encounter such a situation and hope this technique will be of help if it is ever needed.

L.H.Chandler, Jr., M.D., Department of Anesthesia, Providence Hospital, 3200 Providence Dr., Anchorage, Alaska 99504.

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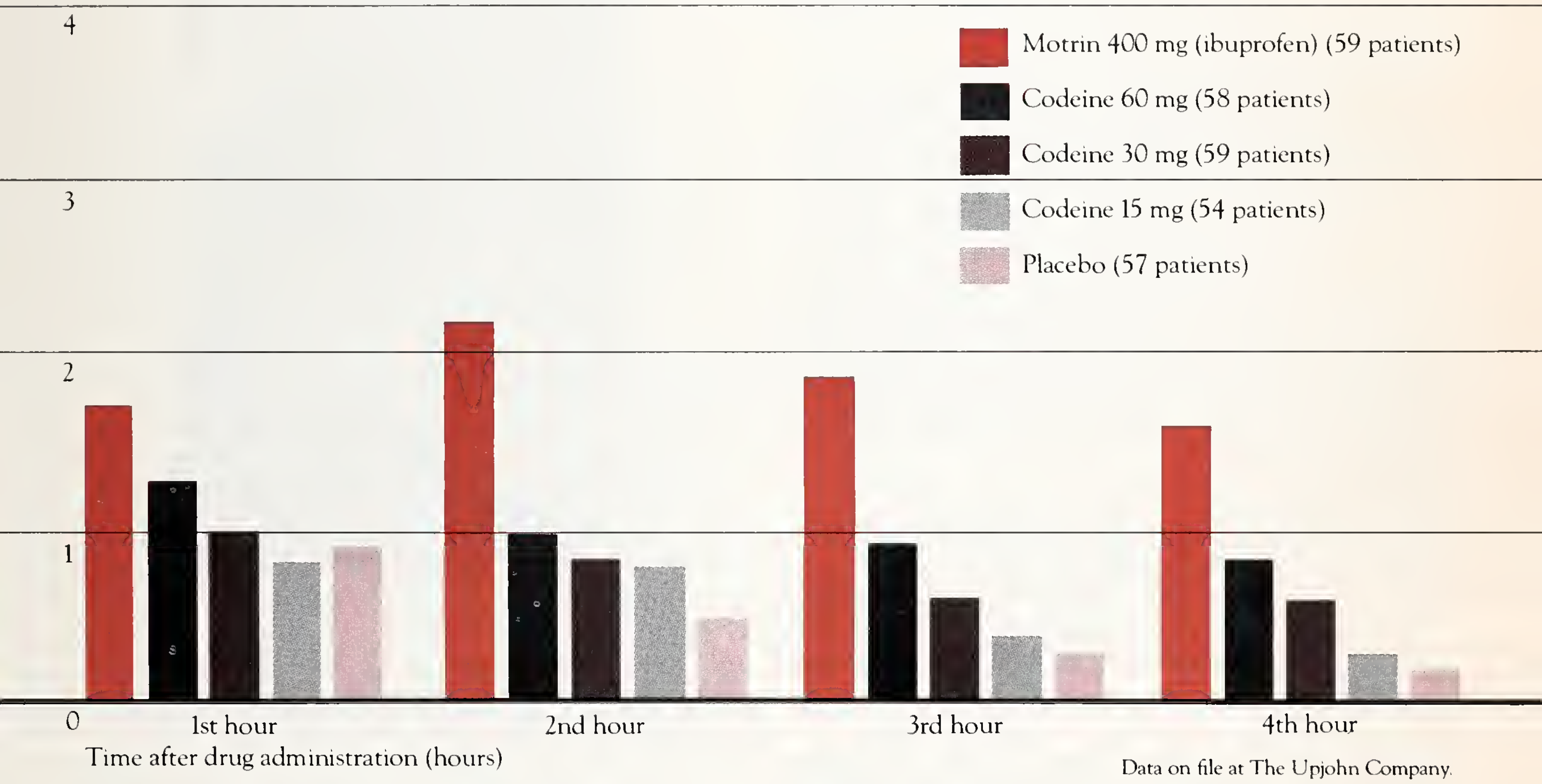

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Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

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*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

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PHYSICIANS AND HEALTH PLANNING

David E. Johnson, M.D. - President

Many physicians feel negative about health planning. Whether personal experiences, statements in the medical press or simply the phrase itself have fostered those negative feelings, they are very real and very important. While I am not a flaming apologist for health planning activities, I believe that health planning is here to stay and that we as physicians can and must actively direct health planning.

To begin with a digression, the phrase "health planning" is itself a bit odd. All of us plan to be healthy. It is better to be healthy and rich than sick and poor. And all of us carry our perceptions of our basic infallibility all the while we ride motorcycles without helmets or smoke three packages of cigarettes daily or live a bed-chair-car existence. The phrase "health planning" somehow dignifies the persistent whimsy that we are the masters of our physical/emotional/social fate if we but apply statistical analysis in a personally caring way. Broken arms, appendicitis, ectopic pregnancy and pneumonia will vanish in the face of reason and warmth thus avoiding that well-known bugaboo Unnecessary Hospitalization. All of this in a system, prescribed in Public Law 93-641, that is openly distrustful of "providers" as being inherently flawed in our intent. The adversary system is at once proposed and enshrined.

Our association is on record by resolution for each of the last two years as opposing the arbitrary provider-consumer dichotomy. One needs to be a little paranoid to begin thinking that some of the professional planners - the academically trained health planners whose career is in the planning system rather than the health care system - would prefer to keep the consumer majority inexperienced and uninformed and malleable. Much more insidious than the mandated consumer majority is the whole matter of definition of provider. It turns out that the hospital laundry worker's dependent grandparent is as much a provider as the hospital administrator in the eyes of the Federal health planning bureaucracy and that the optician's assistant is as much a direct provider as a physician.

Recently the health systems agencies have begun an activity called appropriateness review. Many are pointing to this as an intrusion of HSA activity into the place already taken by Professional Standards Review Organizations (PSRO's). Each side cites legislative authority and mandate and the issue is pitting bureaucracy against bureaucracy. Similarly, deciding what programs are and are not subject to HSA review occupies another cadre of officials. All of the parts of the system are equal, you see but some of the parts are more equal than others.

The medical press has carried a number of alarming tales of HSA's run amok. There has been considerable coverage of the variety of legal challenges to HSA's by organized medicine and by several states. Currently the Federal Trade Commission (FTC) is aiming at health planning efforts contending that health planning involves restraint of trade. While the implied endorsement of HSA effectiveness may be warming to some, the FTC action seems more a guarantee of continued paper-shuffling than any movement toward HSA's somehow serving the taxpayer better.

Against this background of complicated law, clouded intent, bureaucratic turf-guarding and legal confrontation, it seems to me that Alaska's three HSA's are moving along quietly doing a good job. Those of us who have served as physicians on HSA boards have by and large found ourselves among friends. Our patients watch out for their interests which most often coincide very closely with ours. The staffs of all the HSA's in Alaska are very competent and willing to work for rather than against the HSA board of directors.

If you have stayed with me this far you must be wondering what is the point of all this. The point is that we as a medical association have a lot to learn from health planning organizations and that we will be more effective if we learn sooner rather than later. Further, we have a lot to offer health planning in return.

Before I proceed any further, a glossary of terms and acronyms is in order. Alaska is divided into three health systems areas with three health systems agencies (HSA'S): Northern, with offices in Fairbanks; Southcentral, with offices in Anchorage and Southeast, with offices in Ketchikan. Each HSA must complete a Health System Plan (HSP) and an Annual Implementation Plan (AIP). These plans, in turn, are considered by the Statewide Health Coordinating Committee (SHCC), a sort of Super HSA. That organization, whose acronym is pronounced "Shik", is staffed by a state agency called the State Health Planning and Development Agency (SHPDA, pronounced "ship'-da"). SHCC puts out the State Health Plan (SHP). Private physicians have places on all these groups except the SHPDA.

The HSP is a five-year great leap forward; the AIP is a work program for the following year, which grows out of the HSP. The HSP is constructed after looking at unmet health care needs in terms of both health systems and health status. Health systems are those social devices that have a more or less direct influence on health and health care: hospitals, physicians, alcohol treatment programs, etc. Health status is measured by statistical measures that include vital statistics, morbidity and mortality tabulations and by the preceived general level of health of the population. In both the HSP and the AIP the emphasis of health of the population. In both the HSP and the AIP the emphasis is upon unmet needs and nonfunctioning or unavailable systems.

I believe that the Alaska State Medical Association must provide leadership in identifying health status and health systems priorities for Alaska. We are the only group with both the education and the day-to-day experience necessary to accurately identify unmet needs. Further, I believe that ASMA must move our committee deliberations, program emphasis and legislative efforts toward activities which meet more of the identified needs of our state.

I am not trying to push activity for activity's sake. Nor am I trying to build interest through controversy. Rather, I am trying to get us busy doing things that need to be done and that we can do better than anyone else. There is no shortage of controversial subjects on which our leadership is important: marijuana, abortion, alcohol abuse and health insurance to name four. Nor is there a shortage of critics who will be eager to point out what they perceive to be vested interests. All of that simply means that we must identify facts clearly, make recommendations responsibly and follow through vigorously.

This year the ASMA council is going to become more familiar with health planning in Alaska and to direct the association into a larger role in health planning than we have had before. The majority of the work will still fall to those few individuals who serve on the various planning and advisory boards. I am hopeful that we as an association can work together to translate all that work into positive accomplishment for the people of Alaska.

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Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

Her *next* attack of cystitis may require

the Bactrim™ 3-system counterattack

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Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

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Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

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